Rangeland Standards Assessment, Evaluation, and Determination

Pritchard Creek Geographic Unit, Pritchard Creek Grazing Allotment

July 23, 2007

BLM

Vale District Office – Baker Resource Area

August 2007

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Baker Resource Area
PO Box 947
Baker City, OR 97814
OR Baker Mail@blm.gov

TAKE PRIDE® IN AMERICA

IN REPLY REFER TO:
1601, PCGU

July 24, 2007

Dear BLM livestock permittees, Interested Tribes and Publics:

I am pleased to present the Pritchard Creek Geographic Unit (PCGU) and Pritchard Creek Allotment Evaluation for your information. This document summarizes the results of the PCGU rangeland health assessment, evaluation and determination findings and presents recommendations to address related rangeland management issues.

This document ends the assessment and evaluation phase. The upcoming National Environmental Policy Act (NEPA) analysis for this geographic unit will be next. The decisions that can be expected from the NEPA analysis are geographic unit and allotment decisions, rather than land use plan level decisions. They will however, be consistent with the current Baker Resource Area Land Use Plan.

We will begin the NEPA analysis next and you will be notified as to upcoming public meetings. If you would like to comment, please do so in writing. Address your comments to the Baker Field Manager, BLM Baker Resource Area, at P.O. Box 947, Baker City, OR 97814.

Sincerely,

/s/ Nancy K. Lull

Nancy K. Lull
Field Manager

Table of Contents

1 Introduction

This Oregon/Washington Bureau of Land Management (BLM) Rangeland Standards Evaluation addresses four pastures in the Pritchard Creek grazing allotment (#02074) in the Baker Resource Area of Vale District BLM. Approximately 13,587 acres of public land are considered. Livestock operators within the evaluation area hold four BLM term grazing permits that may be affected by the Field Manager Determinations shown in Section 4. The Standards and Guidelines Determinations are legally binding and require the BLM Field Manager to adjust 10-year term grazing permits as needed, to meet the Standards.

The BLM grazing allotment considered in this Evaluation document occurs within the Pritchard Creek Geographic Unit (GU) as described in the Baker Resource Management Plan (RMP) Record of Decision (1989, 82-84). The RMP provides specific management direction for resources found within the GU and for allocation of livestock forage These guidelines may be viewed in Appendix 1, "Rangeland Health Standards - Fundamentals of Rangeland Health".

BLM evaluations report on rangeland resource conditions in relation to the 1997 "Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington" (S&Gs). Using the methods described in Section 2 of this document, BLM resource professionals conducted upland and riparian/wetland field assessments for the evaluation area between March 2003 and January 2004. Determinations included in this document are supported with a variety of information such as technical manuals, field forms, photos, and other notes, which may be found in the Baker Resource Area office.

The findings and reasons for BLM Field Manager Determinations have been explained to permittees and the interested public in public meetings. This Evaluation document will be posted on BLM's official website at: http://www.blm.gov/or/districts/vale/plans/vale.php and OR_Baker_Mail@blm.gov.

2 Background

2.1 Information Presented in This Document

Information contained herein provides permittees and the interested public with summaries of relevant administrative records necessary for authorized officer Determinations. The administrative record for Rangeland Health Evaluation documents may include information such as grazing case files, multiple years of livestock actual use and utilization studies, allotment management plans, annual turnout statements, Interpreting Indicators of Rangeland Health evaluations, and Properly Functioning Condition (PFC) assessments. Upon request, after the completion of the Determinations, the data will be available on compact disk. BLM has taken this streamlined approach in order to minimize the document printing cost, size, and complexity. Individuals interested in examining the full administrative record used to prepare the Evaluation document may do so by either making an appointment to visit the Baker Resource Area Office or by requesting digital copies of the relevant data.

Readers should know that this document does not include grazing permit decisions subject to protest and appeal. Instead, the Determinations and resource narratives contained herein form the foundation for BLM grazing permit renewal decisions, which will be subject to protest and appeal according to federal grazing regulations. Prior to issuance of new grazing permits the Bureau is first required to prepare a NEPA analysis document that will review possible alternatives necessary to address Oregon/Washington Rangeland Health Standards. Once the NEPA analysis process is initiated, BLM will notify permittees and the interested public by US mail and newspaper announcement.

2.2 General Description of the Assessment and Evaluation Area

Dominant shrubs present in the area include mountain big sagebrush, Wyoming big sagebrush, basin big sagebrush, rabbitbrush, and bitterbrush. The key grass species are bluebunch wheatgrass (Agsp), Idaho fescue (Feid), and needlegrass (Stipa). Sandberg bluegrass and cheatgrass are also present but do not comprise a large share of overall plant production.

Pritchard Creek Allotment Standards and Guidelines assessments have revealed that none of the four pastures meet S&Gs, due to livestock grazing. One pasture's Standards were affected by fires in 1998 and two pastures were affected by fires in 2006. Livestock use in these pastures has been modified for two subsequent growing seasons, consistent with Baker RMP decisions. Details of the S&Gs assessments may be found in Table 5 "Standards Determinations Summary for All Grazing Allotment Pastures" and Table 6 "Pastures That Failed to Meet Rangeland Health Standards and Reasons Why Standards Were Not Met," in Section 4.

2.3 History and Process for Assessment and Evaluation of Rangeland Health Standards

Following U.S. Department of Interior approval of revised BLM grazing regulations in 1995, BLM State Directors were assigned the task of developing state-level Rangeland Health Standards according to Title 43 Code of Federal Regulations ([CFR] 43 4180.2, revised 2005). Each state was provided the flexibility to fashion appropriate individual standards and indicators. In 1996, a 10-year time schedule was established for completing all Standards and Guidelines (S&Gs) evaluations.

The task of developing Oregon/Washington (OR/WA) standards, indicators, and guidelines was led by professional BLM staff working in close cooperation with OR/WA Resource Advisory Councils (RACs). The purpose for setting standards and identifying resource indicators was to provide BLM field personnel with the tools for determining whether current management is meeting the Fundamentals of Rangeland Health described under 43 CFR 4180.1(revised 2005). Readers may refer to Appendix 2 "Standards and Indicators Used for OR/WA Evaluations" in this document, for a description of the standards and indicators criteria used.

On August 12, 1997, then Interior Secretary Bruce Babbitt approved the "Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington" (S&Gs). BLM field offices were subsequently directed to conduct field assessments in all livestock grazing allotments and to use the information gathered as part of the rangeland health evaluation process. These sequential assessment and evaluation actions were then used to implement 43 CFR 4180.1-2 and to provide the rationale for 10-year BLM term grazing permit renewals.

The Baker RMP (1989) divided the Baker Resource Area into 14 land-based administrative units termed Geographic Units (GUs). Map 1, "Geographic Units in the Baker Resource Area Management Plan (1989)" in Section 11.1, shows the RMP-designated GUs. Each GU was assigned a boundary and specific management actions. The February 2000 document, "Vale District Planning Update, Baker Resource Area", established the priority for completing the Standards and Guidelines assessments. Pritchard Creek GU was designated third priority in that document. The GU boundary identification and the process of assessing priorities were conducted with public review and comment, as an integral part of the Baker Resource Management Plan (RMP). The Record of Decision concerning the assessments is documented in the RMP.

2.4 Steps in the Assessment, Evaluation and Determination Process

The rangeland health assessment and evaluation process is a complex, multiple-use administrative function. The BLM authorized officer uses the assessment and evaluation process to consider if a management change is needed. The sequential steps listed below indicate how BLM proceeds in this process, beginning with field data collection and ending with an authorized officer Determination whether or not current livestock grazing use is a significant factor if Standards are not being met.

Step 1 - Field Data Collection

BLM collects basic rangeland and riparian field data for the purpose of completing OR/WA Standards assessments, according to the following interagency technical references:

- TR 1734-6 "Interpreting Indicators of Rangeland Health" (Version 4, 2005)
- TR 1737-15 "Riparian Area Management, A User Guide to Assessing Proper Functioning Condition and Supporting Science for Lotic Areas" (1998)
- TR 1737-16 "A User Guide to Assessing Proper Functioning Condition and Supporting Science for Lentic Areas" (1998)

Staff specialists may also record other supplemental field data considered relevant to the assessment and evaluation.

Step 2 - Assessment

The assessment work is complete when an Interdisciplinary (ID) Team has reviewed, compiled, and organized the collected field data. Tentative conclusions are drawn for each of the five OR/WA Standards that may apply to all or part of a pasture. Field forms for both upland and riparian areas provide important clues as to whether Standards are met, and if current livestock grazing use may be a significant factor. However, the authorized officer Determination and finding that current livestock grazing use is or is not a significant factor in meeting Standards, is made after considering the best available information..

Step 3 - Evaluation

BLM staff considers field data, assessment findings, and all other relevant information such as trend monitoring data, and actual use and utilization data, to fully evaluate the consequences of past management actions in grazing allotments. Evaluations are also the point at which BLM staff merges current land use plan objectives such as the RMP and other planning direction. The evaluation is prepared as background and support for the authorized officer Determinations and it sets the stage for grazing permit renewal. Renewed grazing permits must meet both the Standards and management objectives set forth in the land use plan. Subsequent National Environmental Policy Act (NEPA) analysis describe how and why grazing permit changes may occur.

Evaluation narratives will include discussions about existing rangeland conditions and how they are related to allotment management plans (AMPs) and annual grazing authorizations. Discussions about whether or not existing management objectives are being met will also be included. Depending upon the area considered, evaluations may incorporate related information from existing plant or animal Habitat Management Plans (HMPs) and U.S. Fish and Wildlife Service Biological Opinions (BOs). The evaluation will include all relevant information, which helps the authorized officer make a Determination.

Step 4 - Authorized Officer Determinations

Section 4 of this document summarizes the authorized officer Determinations. The Determinations represent the final product of an evaluation where BLM has applied professional judgment and considered the best available information. Field Manager Determinations state whether or not current livestock grazing use is considered a significant factor if there is a failure to meet the Standards. Current livestock grazing use may or may not be the cause for a failure to meet Standards.

BLM staff specialists provide Field Managers with their recommended Determinations. However, Determinations are not final and binding until they are approved by the authorized officer and published in the Assessment and Evaluation document. The date of the authorized officer signature establishes the timeline for which the authorized officer must act to remedy failures to meet the established Standards, related to current livestock grazing use. Determinations based on 43 CFR 4180 are not subject to protest or appeal because they are not considered grazing decisions. Protest and appeal may occur in subsequent grazing decisions based on National Environmental Policy Act (NEPA) documents.

2.1 Oregon/Washington BLM Rangeland Health Standards

The five Oregon/Washington BLM Standards that Interdisciplinary Teams consider in completing an evaluation are summarized below. Readers may refer to Appendix 2 of this document for a complete description of the Oregon/Washington Standards and Indicators used during field assessments.

Standard 1 Watershed Function - Uplands

Upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate, and landform.

Standard 2 Watershed Function - Riparian/wetland areas

Riparian/wetland areas are in properly functioning physical condition appropriate to soil, climate, and landform.

Standard 3 Ecological Processes - Uplands

Healthy, productive, and diverse plant and animal populations and communities appropriate to soil, climate, and landform, are supported by ecological processes of nutrient cycling, energy flow, and the hydrologic cycle.

Standard 4 Water Quality

Surface water and ground water quality influenced by agency actions, complies with State water quality standards.

Standard 5 Native, Threatened and Endangered (T&E), and Locally Important Species

Habitats support healthy, productive, and diverse populations and communities of native plants and animals (including special status species and species of local importance) appropriate to soil, climate, and landform.

2.2 Field Data Collection and Long-Term Monitoring

Assessment and monitoring field data are used to construct an evaluation. The sections below describe the types of information BLM gathered for this Evaluation document.

2.2.1 Upland Data Collection - Rangeland Health Assessments

Multidisciplinary teams viewed representative sites on the allotment and assessed 17 rangeland health indicators at each site, in accordance with Technical Reference 1734-6, "Interpreting Indicators of Rangeland Health" (Version 4, 2005).

2.2.2 Long-term Upland Monitoring

Rangeland trend plot data were collected in accordance with Interagency Technical Reference BLM/RS/ST-96/002+1730, "Sampling Vegetation Attributes" (1996). The main indicators used were ground cover compared to bare ground, and plant species frequency as measured in frequency transects.

2.2.3 Proper Functioning Condition (PFC) Data Collection for Riparian and Wetland Areas

In the PFC assessments, 17 indicators were assessed in accordance with Technical Reference 1737-9, "Process for Assessing Proper Function Conditions" (1993).

2.2.4 Water Quality Monitoring

Between 2000 and 2004, Lawrence and Pritchard Creeks were monitored for one or more of the following constituents:

- Temperature
- Dissolved oxygen
- pH
- Turbidity
- *E. coli*
- Alkalinity
- Nitrates
- Phosphates
- Conductivity

Both Lawrence and Pritchard Creeks exceed the Oregon temperature criteria of 68 °F. Lawrence Creek is currently listed on the Oregon 2004/2006, 303(d) "Water Quality Limited" list, for exceeding temperature criteria. Infrequently, a constituent did not meet state water quality standards, but BLM does not have enough information to show that Lawrence or Pritchard Creek do not meet state water quality standards for anything other than stream temperature. Detailed water monitoring data are available for inspection at the Baker Field Office.

2.2.1 Data Collection for Habitats Supporting Native, Threatened and Endangered (T&E), and Locally Important Species of Plants and Animals

Indicators used in each rangeland health assessment of habitat for Standard 5 (Native, T&E, and Locally Important Species) were:

- Presence or absence of T&E species or species of concern
- Native plant communities
  - Age classes
  - Diversity
  - Habitat connectivity
  - Population recovery

2.3 BLM Obligations under Rangeland Health Regulations

BLM regulations require that the authorized officer (Field Manager) shall take appropriate action as soon as practicable, but not later than, the start of the next grazing year upon determining through assessment or

monitoring by experienced professionals and interdisciplinary teams, that a standard is not being achieved and that livestock are a significant contributing factor to the failure to achieve and conform with the Standards and Guidelines (USDI 1997). Thus, in all four pastures of this evaluation area, where Standards are not being met due to current livestock grazing use, BLM must take management action by spring of 2008.

3 Evaluation Narratives

3.1 Climate

The climate within the allotment is temperate to semi-arid. Temperature and precipitation vary considerably between mountain and valley regions, with greater precipitation and lower temperatures occurring at higher elevations. Annual precipitation ranges from 12 to 16 inches in the Pritchard Creek Allotment.

The winters are generally long, cold, and moist. In major valley areas, such as around Baker City, the average January temperatures range from 24 to 32 °F. As much as 65% of the annual precipitation occurs during the winter.

The summers generally last from May to September and are warm and dry. Average summer temperatures range from 61 to 64 °F. From 8% to 12% of the annual precipitation occurs during summer, often as isolated but intense afternoon thunderstorms. The average growing season ranges from 60 to 90 days.

3.2 Rangeland Vegetation

Dominant shrubs present in the uplands of Pritchard Creek GU include mountain big sagebrush, Wyoming big sagebrush, basin big sagebrush, rabbitbrush, and bitterbrush. The key grass species are bluebunch wheatgrass (Agsp), Idaho fescue (Feid), and needlegrass (Stipa). Sandberg bluegrass, cheatgrass, and medusahead rye are also present on some sites. In each of the four pastures, the health, productivity, and diversity of the plant communities were assessed relative to the ecological site descriptions that are directly tied to the soils (Section 3.5). The assessments follow.

Holman Pasture

Thirty percent of the pasture consists of sites that contain bunchgrasses with low vigor, resulting from lower seed production and a higher density of shrubs. South slopes have a high percentage of annuals with reduced productivity of bunchgrasses. This is allowing annual grasses and weedy species to increase in existing locations and spread to new areas. The abundance of annual grasses and weeds restrict the health and productivity of the site. Annual grasses may not be increasing, but any space they occupy reduces production of perennial grasses. The diversity of riparian species is limited to a single species in some stream reaches.

Lawrence Pasture

Due to wind erosion, plants growing on the 45C soils (Section 3.5) are showing low vigor, with resulting lower seed production of Idaho fescue. On these soils, Idaho fescue has an abnormally high incidence of dead centers, broken clump form, and mortality. 45C sites are partly shifted toward early-seral species such as Sandberg bluegrass and low-growing forbs. South and west slopes have a high percentage of annuals with reduced productivity of Idaho fescue. Annual grasses may not be increasing, but any space they occupy reduces production of perennial grasses.

The high mortality of Idaho fescue, lower vigor of perennial grasses, and widespread infestations of medusahead rye indicates that other sites in this pasture are vulnerable to further change.

Evaluations concluded that Standard 5 was met on the majority of the pasture, but vegetation on the 47D soils (38% of the pasture) has been moderately altered. These soils are predominately on southern aspects, which are hotter and drier.

Upper Pasture

Plants growing on 45C soils are showing low vigor with resulting lower seed production of Idaho fescue due to wind erosion. On these soils, Idaho fescue has an abnormally high incidence of dead centers, broken clump form, and mortality. 45C and 47D sites are partly shifted toward early-seral species such as Sandberg bluegrass and low-growing forbs. There was no reproduction of sagebrush. South slopes have a high percentage of annuals with reduced productivity of Idaho fescue. Annual grasses may not be increasing, but any space they occupy reduces production of perennial grasses.

All trend studies in this pasture indicated an upward trend.

Evaluations concluded there was enough diversity of plant species, but the low vigor of Idaho fescue and abundance of annual grasses and weeds restrict the health and productivity of the site.

The shrub habitat has been reduced and the amount of annual grasses has increased, indicating a lower ecological condition. This is allowing annual grasses and weedy species to increase in existing locations and spread to new areas. The spread of noxious weeds into the riparian areas is a serious threat. Evaluations concluded that sagebrush habitat is limited in this area because of fire and insects and the amount of bare ground will lead to an increase in weed species.

White Rock Pasture

Plants growing on the 45C soils are showing low vigor with resulting lower seed production of Idaho fescue due to wind erosion. On these soils Idaho fescue has an abnormally high incidence of dead centers, broken clump form, and mortality. 45C sites are partly shifted toward early-seral species such as Sandberg bluegrass and low-growing forbs. South slopes have a high percentage of annuals, with reduced productivity of Idaho fescue. Annual grasses may not be increasing, but any space they occupy reduces production of perennial grasses.

The perennial grasses are low in vigor and there is a high incidence of mortality. This is allowing annual grasses and weedy species to increase in existing locations and spread to new areas. The diversity of riparian species is limited to a single species in some stream reaches.

Evaluations concluded that upland plants were showing signs of stress, and riparian species lacked diversity.

3.3 Noxious Weeds and Invasive Plants

An intensive inventory for noxious weed species has not been conducted; however, there are several known sites within portions of the Pritchard Creek Allotment. Leafy spurge, a persistent perennial which is hard to control, is the species of most concern. Diffuse knapweed occurs as well. Both of these species are primarily in the southern portions of the Holman and White Rock Pastures. Small patches of Scotch thistle are fairly common throughout the allotment, primarily near bedding areas and draw bottoms. Whitetop (hoary cress), a perennial mustard, and medusahead rye are increasing in this allotment. One small site of rush skeletonweed has been found recently in the Holman Creek Pasture and is a priority for continued treatment. The spread of noxious weeds into riparian areas is a serious threat to the ecological health of the area .

Holman Pasture

Diffuse knapweed, whitetop, Scotch thistle, and leafy spurge are the primary weed species in this pasture. Knapweed and spurge are treated each year. One small site with four or five plants of rush skeletonweed is also being treated in this pasture. Whitetop and thistle, mainly located in drainage bottoms, salting areas, and near developed water sources, are not being treated unless incidental to treatments on the other species.

Lawrence Pasture
There is no current, specific information for weed sites in this pasture. The Lawrence Creek Pasture will be a priority when time and funding allow for an adequate weed survey.

Upper Pasture
Leafy spurge, whitetop, and Scotch thistle are the primary weed species in this pasture. Leafy spurge has been treated and treatment will continue as new areas are located. Whitetop and thistle are not being treated and are mainly located in drainage bottoms, salting areas, and near developed water sources.

White Rock Pasture
Leafy spurge, whitetop, and Scotch thistle are the primary weed species in this pasture. Leafy spurge has been treated and treatment will continue as new areas are located. Whitetop and thistle are not being treated and are mainly located in drainage bottoms, salting areas, and near developed water sources.

3.4 Special Status Plants

There are no documented occurrences of special status plants in the Pritchard Creek Allotment.

3.5 Soil and Water Resources and Riparian/Wetland Areas

The following information is from the Baker County Soil Survey, June 1997.

Holman Pasture
Soil
Eighty-six percent of the pasture has zero to 35% slope. The following three soils account for 72% of the pasture:

45C - Durkee gravelly silt loam, 2-12% slopes. This soil is moderately deep, well drained, and found on ridges. Permeability is moderate, runoff is slow or medium, and the hazard of water erosion is slight to moderate. The potential plant community is dominated by Idaho fescue and mountain big sagebrush.

46D - Durkee gravelly silt loam, 12-35% slope. This soil is moderately deep, well drained, and found on north slopes. Permeability is moderate, runoff is medium, and the hazard of water erosion is moderate to high. The potential plant community is dominated by Idaho fescue and squaw apple. Squaw apple was not observed on the reference site.

47D - Durkee gravelly silt loam, 12-35% slope. This soil is moderately deep, well drained, and found on south slopes. Permeability is moderate, runoff is medium, and the hazard of water erosion is moderate to high. The potential plant community is dominated by bluebunch wheatgrass, Idaho fescue, mountain big sagebrush, and squaw apple. Squaw apple was not observed on the reference site.

Water
Water quality data was not collected on the streams in this particular pasture but PFC stream surveys were completed on each of the perennial and intermittent streams. The streams in this pasture are tributaries to Alder Creek and Burnt River, which are listed as 303(d) streams because of excessive temperature and sediment. Water quality is tied to Standards 2 and 3, which are not being met.

PFC surveys on the southern portion showed increased width/depth ratio and a lack of native vegetation, which can lead to increased stream temperatures, increased sedimentation, and decreased dissolved oxygen levels. Evaluations concluded the surface water quality standards were not being met.

Riparian/Wetland Areas

PFC surveys have been completed on 5.6 miles of stream in this pasture. An additional 7.5 miles of stream were determined to be ephemeral. The results are as follows:

40% properly functioning
20% functioning at risk with an upward trend
11% functioning at risk with a downward trend
27% functioning at risk with a not apparent trend
2% non-functioning

The reasons for the downward trend are:

Small channel down-cutting and headcutting.
Springs are being dewatered because of lack of maintenance.
High grazing utilizations are resulting in plant degradation.

Lawrence Pasture

Soil

Fifty-four percent of the pasture ranges from zero to 35% slope; and 33% of the pasture ranges from 36% to 60% slope. The first five soils below account for 94% of the pasture:

45C - Durkee gravelly silt loam, 2-12% slopes. This soil is moderately deep, well drained, and found on ridges. Permeability is moderate, runoff is slow or medium, and the hazard of water erosion is slight to moderate. The potential plant community is dominated by Idaho fescue and mountain big sagebrush.

46D - Durkee gravelly silt loam, 12-35% slope. This soil is moderately deep, well drained, and found on north slopes. Permeability is moderate, runoff is medium, and the hazard of water erosion is moderate to high. The potential plant community is dominated by Idaho fescue and squaw apple. Squaw apple was not observed on the reference site.

47D - Durkee gravelly silt loam, 12-35% slope. This soil is moderately deep, well drained, and found on south slopes. Permeability is moderate, runoff is medium, and the hazard of water erosion is moderate to high. The potential plant community is dominated by bluebunch wheatgrass, Idaho fescue, mountain big sagebrush, and squaw apple. Squaw apple was not observed on the reference site.

46E - Durkee gravelly silt loam, 36-60% slopes. This soil is moderately deep, well drained, and found on north slopes. Permeability is moderate, runoff is rapid, and the hazard of water erosion is high or very high. The potential plant community is dominated by Idaho fescue and squaw apple. Squaw apple was not observed on the reference site.

47E - Durkee gravelly silt loam, 36-60% slopes. This soil is moderately deep, well drained, and found on south slopes. Permeability is moderate, runoff is rapid, and the hazard of water erosion is high or very high. The potential plant community is dominated by bluebunch wheatgrass, Idaho fescue, mountain big sagebrush, and squaw apple. Squaw apple was not observed on the reference site.

120D - Oxman-Xeric Torriorthents silt loam, 12-35% slopes. This is a complex of soils (50% Oxman and 35% Xeric Torriorthents) in the 9- to 12-inch precipitation zone on the southern portion of this pasture and the allotment. These soils make up only 3% of this pasture and occur on 9% of the allotment. These soils are very shallow to moderately deep, well drained, and found on side slopes of dissected fan terraces. Permeability is moderate, runoff is medium or rapid, and the hazard of water erosion is moderate to high. The potential plant community is dominated by bluebunch wheatgrass and Wyoming big sagebrush on the Oxman soils. The other soils are dominated by antelope bitterbrush, needle and thread grass, Thurber needlegrass, basin big sagebrush, and rabbitbrush. No reference site was located for this soil type and/or range site.

Water

Water quality data were collected on Pritchard and Lawrence Creeks in this pasture. Temperature exceeded the state water quality standards. Lawrence Creek is on the Oregon 303(d) list due to high temperature. This is tied with Standards 2 and 4, which are not being met.

BLM does not manage the upper headwaters of Pritchard, Lawrence, or Sardine Creeks, and their condition is unknown.

PFC surveys showed increased width/depth ratio, lack of vegetation, and bank trampling which can lead to increased stream temperatures, increased sedimentation, and decreased dissolved oxygen levels.

Riparian/Wetland Areas

PFC has been completed on 10.11 miles of stream in this pasture. An additional 5.5 miles of stream were determined to be ephemeral. The results are as follows:

22% properly functioning
26% functioning at risk with an upward trend
23% functioning at risk with a downward trend
21% functioning at risk with trend not apparent
8% non functional

The reasons for the downward trend are:

Active headcutting and down-cutting of stream channels.
Springs and seeps adjacent to stream channels are being dewatered.
Low diversity of riparian species and lack of woody species.
Riparian zone is not widening and channel width is not narrowing.
High grazing utilizations are resulting in bank trampling.

In the Lawrence watershed 9% of the total acreage lies outside of the allotment; thus, BLM has little control of the headwater.

Upper Pasture

Soil

Eighty-seven percent of the pasture ranges from zero to 35% slope. The following four soils account for 90% of the pasture:

45C - Durkee gravelly silt loam, 2-12% slopes. This soil is moderately deep, well drained, and found on ridges. Permeability is moderate, runoff is slow or medium, and the hazard of water erosion is slight to moderate. The potential plant community is dominated by Idaho fescue and mountain big sagebrush.

46D - Durkee gravelly silt loam, 12-35% slopes. This soil is moderately deep, well drained, and found on north slopes. Permeability is moderate, runoff is medium, and the hazard of water erosion is moderate to high. The potential plant community is dominated by Idaho fescue and squaw apple. Squaw apple was not observed on the reference site.

47D - Durkee gravelly silt loam, 12-35% slopes. This soil is moderately deep, well drained, and found on south slopes. Permeability is moderate, runoff is medium, and the hazard of water erosion is moderate to high. The potential plant community is dominated by bluebunch wheatgrass, Idaho fescue, mountain big sagebrush, and squaw apple. Squaw apple was not observed on the reference site.

46E - Durkee gravelly silt loam, 35-60% slopes. This soil is moderately deep, well drained, and found on north slopes. Permeability is moderate, runoff is rapid, and the hazard of water erosion is high or very high. The potential plant community is dominated by Idaho fescue and squaw apple. Squaw apple was not observed on the reference site.

Water

Water quality data were collected on the streams in this pasture and PFC stream surveys were completed on each of the perennial and ephemeral streams. The streams in this pasture are tributaries to Burnt River and Lawrence Creek, which are on the Oregon 303(d) list due to high temperatures. The headwaters of Pritchard Creek are not in public ownership, but water quality data collected at the confluence of Pritchard and Lawrence Creeks exceed state standards for temperature. This is tied with Standards 2 and 4, which are not being met.

PFC surveys showed increased width/depth ratio, lack of vegetation, and bank trampling, which can lead to increased stream temperatures, increased sedimentation, and decreased dissolved oxygen levels.

Riparian/Wetland Areas

PFC has been completed on 4.4 miles of stream in this pasture. An additional 5.6 miles of stream were determined to be ephemeral. The results are as follows:

22% properly functioning
6% functioning at risk with an upward trend
35% functioning at risk with a downward trend
37% functioning at risk with a no apparent trend - adequate vegetation with channel instability

The reasons for the downward trend are:

Active headcutting and down-cutting of stream channels.
Springs and seeps adjacent to stream channels are being dewatered.
Low diversity of riparian species and lack of woody species.
Riparian zone not widening and channel width not narrowing.
High grazing utilizations are resulting in bank trampling.

White Rock Pasture

Soil

The following three soils account for 79% of the pasture; 83% of the pasture has zero to 35% slope.

45C - Durkee gravelly silt loam, 2-12% slopes. This soil is moderately deep, well drained, and found on ridges. Permeability is moderate, runoff is slow or medium, and the hazard of water erosion is slight to moderate. The potential plant community is dominated by Idaho fescue and mountain big sagebrush.

46D - Durkee gravelly silt loam, 12-35% slope. This soil is moderately deep, well drained, and found on north slopes. Permeability is moderate, runoff is medium, and the hazard of water erosion is moderate to high. The potential plant community is dominated by Idaho fescue and squaw apple. Squaw apple was not observed on the reference site.

47D - Durkee gravelly silt loam, 12-35% slope. This soil is moderately deep, well drained, and found on south slopes. Permeability is moderate, runoff is medium, and the hazard of water erosion is moderate to high. The potential plant community is dominated by bluebunch wheatgrass, Idaho fescue, mountain big sagebrush, and squaw apple. Squaw apple was not observed on the reference site.

Water

Water quality data was not collected on the streams in this particular pasture; however, PFC stream surveys were completed on each of the perennial and ephemeral streams. Water quality is tied with Standards 2 and 4, which are not being met.

PFC surveys showed increased width/depth ratio, lack of vegetation, and bank trampling, which can lead to increased stream temperatures, increased sedimentation, and decreased dissolved oxygen levels.

Evaluations concluded that surface water quality standards were not being met.

Riparian/Wetland Areas

PFC has been completed on 6.16 miles of stream in this pasture. In addition, 1.7 miles of stream were determined to be ephemeral. The results are as follows:

26% properly functioning
18% functioning at risk with an upward trend
56% functioning at risk with a downward trend

The reasons for the downward trend are:

Active headcutting and down-cutting of stream channels.
Springs and seeps adjacent to stream channels are being dewatered.
Low diversity of riparian species and lack of woody species.

Riparian zone not widening and channel width is not narrowing.
High grazing utilizations are resulting in bank trampling.

3.6 Fish and Aquatic Habitat

There are two perennial streams in narrow canyons located within the GU boundary (Pritchard Creek and Lawrence Creek), and three minor streams (Holman Creek, Straw Ranch Creek, and Unity Creek). Both Pritchard Creek and Lawrence Creek have redband trout populations. Four miles of Pritchard Creek and 3.5 miles of Lawrence Creek lie within the GU boundary, but the headwaters of both streams originate on private lands.

Pritchard Creek

Data and information have been gathered on Pritchard Creek from stream surveys monitoring water quality and stream temperature over the last 30 years. A physical and biological stream survey was completed by the BLM in 1977 and a stream habitat inventory was completed in 1991. Both surveys collected information on these parameters:

- Substrate
- Pools
- Gradient
- Width/depth ratio
- Bank cover
- Stream temperatures
- Erosion
- Riparian condition
- Species present

A PFC survey was completed in 2001. Water quality was monitored from 2001 to 2003 and stream temperatures were monitored throughout the grazing season in 2003 and 2004.

In the mid 1990s this area had a flash flood from an isolated storm event. The storm was intense enough that all the channels flooded. Tons of material flowed into the streams from upland and riparian areas adjacent to Pritchard and Lawrence Creek. At the confluence of both streams, gravel was deposited approximately 6-10 feet deep. All vegetation in the flood plain was either buried or ripped out. After the event a large gravel deposit existed from the confluence of both streams to the Burnt River, a distance of about 3 miles.

The presence of native redband trout has been verified in each of the stream surveys, from the confluence with Lawrence Creek, upstream to the first main tributary, a distance of approximately 2.75 miles. Observations during late summer over several years have revealed water temperatures above 70 °F with fish stressed and near death. Many are isolated in pools with no adjoining habitat.

Both stream surveys in 1977 and 1991 confirmed re-occurring or on-going problems, which have improved only slightly over the last 30 years. Each survey documented a presence of less than 10% pool habitat, and adverse width to depth ratio with widening continuing and shallow stream depth. The riparian area is limited due to the steep terrain, and does not have the diversity of aquatic plants needed to maintain streambank stability. There is some revegetation on point bars but restoration is not occurring throughout the stream reach. There is some erosion and contribution of sediment from early high flows due to upland condition. This contributes to down-cutting, widening, and unstable streambanks. Canopy cover is less than 10% on most of the stream, causing increases in water temperatures.

The present stream and riparian condition was re-confirmed with the PFC surveys that occurred in 2003 and 2004. Portions of the stream were rated as Functioning At Risk in an upward or downward trend, or as Not Functioning.

Stream temperatures on Pritchard Creek were recorded in 2003 and 2004. The 7-day maximum for both years was over 90 °F. In both years, stream temperature was over 68 °F. for over 90 days. These high temperatures affect availability of dissolved oxygen, and the redband trout growth rate, metabolic process, ability to capture and use food, and ability to withstand disease. The lethal temperature limit for trout is between 24 to 29.5 °Celsius (75 to 85 °F).

The water quality parameters of dissolved oxygen (DO), turbidity, and pH were measured for 3 years on Pritchard Creek, from 2001 to 2003. The range for DO in those 3 years was 8.45-11.35 milligrams per liter (mg/l), turbidity was 0.75-6.13 Nephelometric Turbidity Units (NTUs), and the pH range was 8.2-8.8. The lowest DO was late in the summer due to high temperatures and low flows. The highest turbidity was early in the spring during high flows.

Lawrence Creek

Data and information have been gathered on Lawrence Creek over the last 30 years, from stream surveys monitoring water quality and stream temperatures. A physical and biological stream survey was completed by the BLM in 1977 and stream habitat inventory was completed in 1991. Both surveys collected information on these parameters:

- Substrate
- Pools
- Gradient
- Width/depth ratio
- Bank cover
- Stream temperatures
- Erosion
- Riparian condition
- Species present

A PFC survey was completed in 2002. Water quality was monitored from 2001 to 2003 and stream temperatures were monitored all year long from 2000 to 2004.

The presence of native redband trout has been verified in each of the stream surveys, from the confluence with Pritchard Creek and upstream into main Lawrence Creek headwaters. They were also noted in Ayers Creek and Sardine Creek. Observers noted that the trout were very thin, indicating a shortage of food. Sampling showed a very poor aquatic insect population. Many fish were isolated in pools with no adjacent habitat.

Each of the surveys has confirmed recurring or on-going problems that have only slightly improved over the last 30 years. Each survey has confirmed a pool habitat of less than 10%. The width to depth ratio is out of balance with widening continuing, along with shallow stream depth. The riparian area is narrow but is in good condition. There is diversity of shrubs in the riparian areas including willow, elderberry, mock orange, serviceberry, currant, aspen, alder, rose, birch, and cottonwood. Aquatic grasses that would help stabilize the stream banks are in limited supply. There is very little erosion or bank cutting in the lower reaches but the upper reach has a bank erosion component of 50-75%. The canopy cover ranges from 30% to 45% in the lower reaches, but is only 3% in the upper headwaters.

The present stream and riparian condition was re-confirmed with the PFC surveys that occurred in 2003 and 2004. Portions of the stream were rated as in Proper Functioning Condition or Functioning At Risk in an upward trend.

Stream temperatures on Lawrence Creek were recorded from 2000 to 2004. The 7-day maximum for those years was between 83.0 °F to 87.0 °F. During the monitoring period from 2000 to 2004, the stream temperatures were over 68 °F for a minimum of 80 days each year. These high temperatures affect the availability of dissolved oxygen and the redband trout growth rate, metabolic process, ability to capture and use food, and ability to withstand disease. The lethal limit for trout is between 24°C to 29.5 °C (75°F to 85 °F).

The water quality parameters of DO, turbidity and pH were measured for 3 years on Lawrence Creek, from 2001 to 2003. The range for DO in those 3 years was 7.27-16.11 mg/l, turbidity was 1.25-17.2 NTUs, and the pH range was 8.3-8.9. The lowest DO was late in the summer due to high temperatures and low flows. The highest turbidity was early in the spring during high flows.

The tables below display historical stream data from surveys taken from 1977 to 1991 on Pritchard and Lawrence Creeks. This data summarizes the detailed information acquired during the stream surveys, discussed in the summaries above.

3.7 Terrestrial Wildlife and Wildlife Habitat

Terrestrial wildlife designated by U.S. Fish and Wildlife Service (USFWS) as potential species of concern, which may occur within the Pritchard Creek Allotment, are Western burrowing owl (*Athene cunicularia hypugea*), ferruginous hawk (*Buteo regalis*), pygmy rabbit (*Brachylagus idahoensis*), and the greater sage-grouse (*Centrocerus urophasianus*).

The Western burrowing owl is a small owl species that nest underground. The burrowing owl is mottled brown bird with a white chin. Burrowing owls are associated with open grasslands that have a high rodent population. Burrowing owls also heavily rely on badgers to provide nesting areas. The loss of suitable habitat from both fragmentation and urbanization has lead to the decline of the burrowing owl population. Throughout Pritchard Creek Allotment there is potential for this owl to inhabit the area because of the open space, loose to heavy soils, and the rodent population. However, currently there is no recorded Western burrowing owl population in this allotment.

The ferruginous hawk, often seen soaring, is white to light colored on its undersides and red to rust colored on its back, with a "V" like brown belt which meets under its legs. This hawk prefers open areas like the high desert, with less than 50% shrub cover. The main staple of its diet is rodents. Overall, ferruginous hawk populations are on the decline throughout their breeding range. This is due to the loss of breeding and wintering habitat through fragmentation, urbanization, and the conversion of native rangeland into a non-native vegetative community. Pritchard Creek Allotment provides habitat and food sources in which a ferruginous hawk could complete its life cycle. Ferruginous hawks have been seen throughout this area, but no nest sites have been recorded. It is a possible transit species.

Little is known about the distribution of pygmy rabbits in northeast Oregon. However, pygmy rabbits are endemic to the Great Basin desert and surrounding intermountain areas. Pygmy rabbits require a mosaic of sagebrush for both cover and a as a food source. These rabbits prefer soils that are both loose enough to burrow through, yet compact enough to keep shape. Burrow systems are typically constructed under clumps of big sagebrush, once again reinforcing the vital role of sagebrush to pygmy rabbit survival. Pygmy rabbits throughout their range are in decline. This is partly due to a loss of habitat, habitat degradation and fragmentation of remaining sagebrush ecosystems as the land was converted into farms, ranches, and urban development over the past 50 years. Although there is no known occurrence of pygmy rabbits within the Prichard Creek Allotment, there is a possibility they are present due to the presence of some suitable habitat.

The greater sage-grouse, which is a Bureau sensitive species, is present throughout the allotment. Suitable sagebrush cover throughout Pritchard Creek Allotment for sage-grouse is approximately 61%. Desired minimum wildlife habitat condition recommendations call for maintaining approximately 50% to 75% of the surface acreage of habitat capable of supporting sagebrush communities in any given management area. The Standards and Guides showed the habitats within the Pritchard Creek Allotment meet these

Table 1. Standards and Guides Historical Information for the Pritchard Creek and Lawrence Crk. Stream Surveys Summarized (Surveys from 1977 and 1991)

Pritchard Creek Stream Survey 1977 – below confluence with Lawrence Cr.

Stream habitat	Pools-riffles	Gradient	Width depth ratio	% cover shade	Bank cover	Cobble embedded.	Stream temps	Erosion	Riparian Condition	Riparian Species
Reach 1 P1	<10% pools	1-2.5%	Width 8.0 ft.	<10%	20-40% bank damage	Gravel/cobble	16.0 C	16-25% bare soil – 11-25% silt / sediment	Poor-Fair Livestock eliminating streamside vegetation and causing streambank damage	Herbaceous and sage
Reach 2 P1-P2	<10% pools	1-2.5%		<10%	34% of streambanks show livestock damage	Gravel/cobble			Poor- fair	

Limiting Factors - lack of pools, stream shade and cover
P1 - very limited pool areas
P1 - P2 trout and bridgelip suckers seen

Pritchard Creek Stream Survey 1991

Stream habitat	Pools-riffles	Gradient	Width and depth	% canopy cover shade	Bank cover	Cobble embeded.	Stream temps	erosion	Riparian Condition	Riparian Species
Reach 1	High percentage of riffles - <10% pools	1.5-6%	ave. width 4-4.5' ave. depth 0.2-0.3'	0%	Boulder and rock with some grasses, a lot of exposed soil	No embeddedness Cobble/gravel/ boulder substrate	57-65 F. 6-25-91	High 25-50%	Limited due to valley form	Mock orange, Wyoming big sage, antelope bitter brush, choke cherry, service berry, grasses, monkey flower
Reach 2	Low % of pools - <10%	1-4%	ave. width 4-5' ave. depth 0.2-0.3'	0%		No embeddedness Small and large gravel substrate	70-74 F. 6-27-91	25-50% Severe erosion last 600 feet		Woods rose, big basin sage, monkey flower, cheatgrass, milkweed, sedge

Limiting Factors – valley form, bank erosion, limited water, shallow from widening of channel, sediment, limited pools
Reach 1 – From confluence with Lawrence Creek to approx. 2.75 miles north and junction with 1st trib. - fish verified, high use by cattle, trail to stream and bank erosion due to trampling
Reach 2 – From confluence with first trib, northwest to second trib. – approx. 1.25 miles - no fish

Lawrence Creek Stream Survey 1977

Stream habitat	Pools-riffles	Gradient	Width depth ratio	% cover shade	Bank cover	Cobble embeded	Stream temps	erosion	Riparian Condition	Riparian Species
Reach 1 L1- L6	6.1% pools	>2.5 %	6.4' width	10% shade	Gravel and boulder 5% bare soil 0-10% bank damage	Some – a lot of silt reported	16.5 C.	Less than 10%	Very little due to V channel	Herbaceous sage
Reach 2 L7- L12	7.2 % in pools	>2.5 %	6.25' width	<10 % shade	6-25 % bare soil, 25% bank damage		16.5 C	10-55% bank erosion		Herbaceous Sage Cottonwood Mock orange
Reach 3 L13-L16	10.3% in pools	>2.5%	5.6' width	<10%	16-25% bare soil, 41% or more bank damage			51-72 % bank erosion		Herbaceous Sage Cottonwood Mock orange

Limiting Factors:
L1- L6 – lack of pools, low stream shade and cover, livestock trail creating bare soil, rainbow trout seen and young bridgelip suckers
L7- L12 – lack of pools, lack of stream shade and cover, livestock trailing
L13- L16 - lack of pools, lack of stream shade and cover, 3-12 " rainbow trout and young suckers

Lawrence Creek Stream Survey 1991

Stream habitat	Pools-riffles	Gradient	Width depth ratio	% canopy cover shade	Bank cover	Cobble embeded	Stream temps	erosion	Riparian Condition	Riparian Species
Reach 1	High % of riffles Areas of pools to 1.0 depth	2-3%	Width 6.5-8' ave. depth 0.3-0.4'	30%	bedrock	Cobble/large and small gravel	65-79 F. 7-2-91	Little – no erosion	Very narrow – Good condition - no evidence of grazing	Juniper, alder, willow, service berry, ribes, mock orange, rose, elderberry and sumac
Reach 2	High % of riffles pools to 1.0 depth	2.5-6%	Width 8-10' ave. depth 0.3-0.5'	45%		Gravel/ cobble, few boulders	64-71 F 7-3-91	Good stability	Good condition - no evidence of grazing	Cottonwood water birch, juniper, redozier dogwood, service berry, ribes, mock orange and rose
Reach 3	High % of riffles pools to 1.0 depth	2.5-3%	Width 6.5-8' ave. depth 0.6-0.8'	3%		Small and large gravel	70-73 F. 7-12-91	High erosion 50-75%	Trailing evident- Poor- Fair condition	Willow, alder, water birch, aspen, ribes, cheatgrass, thistles

Limiting Factors – lack of shade in some areas, size of gravels, lack of pools, lack of future LWD
Reach 1 – Few trout seen, no grazing use
Reach 2 – Many trout seen, no grazing use
Reach 3 – Few trout seen, grazing evident with heavy trailing

requirements (Hagen 2005). In addition, the proximity of these sagebrush habitats would allow for migration into and out of the area with effective protection from predators. However, both overstory and understory components (percentage of vegetation) have to meet sage-grouse requirements to have a successful rating for Standard #5. The understory component is insufficient to meet Standard #5.

Sage-grouse prefer a sagebrush cover class of approximately 15-25% (Hagen 2005). These cover classes have at least 40-80 cm height distribution. The understory of perennial grasses is insufficient to allow nesting and hiding cover, therefore, it does not meet habitat requirements for sage-grouse. Oregon Department of Fish and Wildlife (ODFW) have routinely counted the number of sage-grouse males on leks located within this allotment. All sage-grouse counts indicate that the population is stable at this time, but the insufficient grass cover may produce a declining trend, further contributing to an unsuccessful rating for Standard #5.

Other important wildlife species that are not considered endangered, threatened, a candidate species, or a sensitive species within this allotment include resident game such as American pronghorn (*Antilocapra americana*), mule deer (*Odocoileus hemionus*), elk (*Cervus canadensis*), and chukar (*Alectoris chukar*). In addition, several nongame species including the red-tailed hawk (*Buteo jamaicensis*), golden eagle (*Aquila chrysaetos*), Lazuli buntings (Passerina amoena), sage sparrow (*Amphispiza belli*), common nighthawk (*Chordeiles minor*), and western meadowlarks (*Sturnella neglecta*) are found throughout this allotment. For a complete USFWS list of potential species of concern see Table 2 below, listing "Potential Species of Concern."

In the summer of 2006, a fire burned through the Pritchard Creek GU. This fire burned fairly hot and fast throughout the Upper Pasture and White Rock Pasture, and damaged shrubs and grasses. Most of the perennial grasses in the burned area are expected to recover fully without any rehabilitation, due to intact root masses on most perennial grasses. However, sagebrush burned twice in Upper Pasture (1998 and 2006) and is expected to take 30 to 50 years to recover. White Rock Pasture experienced a fast burn in 2006 and the sagebrush is expected to reestablish in time.

Holman Pasture
There are two active and one historic sage-grouse leks at the top of this pasture. The fire that occurred in 2006 will have little effect on forage and nesting habitat because the fire only minimally damaged the sagebrush and perennial grasses. Sage-grouse activity is expected to remain stable.

Because perennial grasses were minimally affected by the fire, forage quality and nutrition for future use in this pasture by game, nongame, and livestock is expected to be normal. There may have been temporary wildlife dispersal due to the fire, but as the perennial grasses reestablish, the wildlife will move back into the area.

Lawrence Pasture
Within the Lawrence Pasture there is one active sage-grouse lek. This lek was not affected by the fire of 2006 but some of the adjacent nesting habitat burned. The fire burned the northwest portion of the pasture. There was some loss of sagebrush and minimal loss of perennial grasses throughout this pasture; full recovery is expected without rehabilitation.

Because perennial grasses were minimally affected by the fire, forage quality and nutrition for future use in this pasture by game, nongame, and livestock is expected to be normal.

Upper Pasture
The Upper Pasture near the northwest end sustained substantial damage from the fire in 2006. There are no known active sage-grouse leks within this pasture. However, there are two historic leks located in the northeast portion of the pasture, none of which were included in the fire. Some potential nesting habitat was affected by the fire through loss of bitterbrush, sagebrush and some loss of perennial grasses.

Perennial grasses are expected to recover without rehabilitation but this pasture will have some shrub loss. There may have been temporary wildlife dispersal due to the fire, but as the perennial grasses recover wildlife will move back into the area.

White Rock Pasture
The White Rock Pasture had the most significant damage due to the fire in 2006. Sagebrush, bitterbrush, and perennial grasses were lost due to high fire temperatures, particularly toward the north end of the pasture. There is one active sage-grouse lek in this pasture that ODFW has been monitoring. Although the lek itself is in good condition, the adjacent nesting habitat suffered loss due to the fire. Sage-grouse are expected to relocate to a different, satellite lek site until female sage-grouse are present at the lek.

There may have been temporary wildlife dispersal due to the fire, but as the perennial grasses recover, wildlife will move back into the area.

3.2 Wild Horses

There are no wild horses in the Pritchard Creek Allotment.

3.3 Rangeland Grazing Use

History
The Pritchard Creek Allotment lies north of Interstate Highway 84 between Baker City and Durkee, Oregon. It is a four-pasture, native range allotment that has had a rest-rotation grazing system applied to it since 1966. The grazing use period was 4/16 to 8/31. The key grass species are bluebunch wheatgrass (Agsp), Idaho fescue (Feid), and needlegrass (Stipa). For the most part, it has south facing slopes and topography varies from rolling to steep and rugged.

Table 2. Status of USFWS Potential Species of Concern (June 2007)

Species	Listed as	Present on Site	Description
Bird Species			
Bald eagle (*Haliaeetus Leucocephalus*)	T	No known occurrence	Inadequate habitat
Yellow-billed cuckoo (*Coccyzus americanus*)	CS	No known occurrence	Inadequate habitat
Northern goshawk (*Accipter gentilis*)	SC	No known occurrence	Inadequate habitat
Western burrowing owl (*Athene cunicularia hypugea*)	SC	Possible	Supportive habitat
Ferruginous hawk (*Buteo regalis*)	SC	Possible	Supportive habitat
Greater sage-grouse (*Centrocerus urophasianus*)	SC	Yes	Supportive habitat
Olive-sided flycatcher (*Contopus cooperi*)	SC	No known occurrence	Inadequate habitat
Willow flycatcher (*Empidonax trailli adastus*)	SC	No known occurrence	Inadequate habitat
Yellow-breasted chat (*Icteria virens*)	SC	No known occurrence	Inadequate habitat
Lewis' woodpecker (*Melanerpes lewis*)	SC	No known occurrence	Inadequate habitat
Mountain quail (*Oreortyx pictus*)	SC	No known occurrence	Inadequate habitat
White-headed woodpecker (*Picoides albolavatus*)	SC	No known occurrence	Inadequate habitat
Mammal Species			
Pygmy rabbit (*Brachylagus idahoensis*)	SC	Possible	Supportive habitat
Pale western big-eared bat (*Corynorhinus townsendii pallescens*)	SC	No known occurrence	Species occurrence not known
California wolverine (*Gulo gulo luteus*)	SC	No known occurrence	Inadequate habitat
Silver-haired bat (*Lasionycteris noctivagans*)	SC	No known occurrence	Potential habitat/ unsurveyed
Small-footed myotis (bat) (*Myotis ciliolabrum*)	SC	No known occurrence	Potential habitat/ unsurveyed
Long-eared myotis (bat) (*Myotis evotis*)	SC	No known occurrence	Potential habitat/ unsurveyed
Fringed myotis (bat) (*Myotis thysanodes*)	SC	No known occurrence	Potential habitat/ unsurveyed
Long-legged myotis (bat) (*Myotis volans*)	SC	No known occurrence	Potential habitat/ unsurveyed
Yuma myotis (bat) (*Myotis yumanensis*)	SC	No known occurrence	Potential habitat/ unsurveyed
California bighorn (*Ovis canadensis californiana*)	SC	No known occurrence	Inadequate habitat
Preble's shrew (*Sorex preblei*)	SC	No known occurrence	Supportive habitat
Fish Species			
Bull trout (Columbia River Basin) (*Salvelinus confluentus*)	T/CH	Historic/No known occurrence	Inadequate habitat
Interior redband trout (*Oncorhynchus mykiss gibbsi*)	SC	Yes	Supportive habitat
Amphibian and Reptile Species			
Columbia spotted frog (*Rana luteiventris*)	CS	No known occurrence	Inadequate habitat
Tailed frog (*Ascaphus truei*)	SC	No known occurrence	Inadequate habitat
Northern sagebrush lizard (*Sceloporus graciosus graciosus*)	SC	No known occurrence	Inadequate habitat
Plant Species			
Howell's spectacular thelypody (*Thelypodium howellii ssp. Spectabilis*)	T	No known occurrence	Inadequate habitat
Slender moonwort (*Botrychium lineare*)	CS	No known occurrence	Inadequate habitat
Wallowa ricegrass (*Achnatherum wallowaensis*)	SC	No known occurrence	Inadequate habitat
Upward-lobed moonwort (*Botrychium ascendens*)	SC	No known occurrence	Inadequate habitat
Crenulate grape-fern (*Botrychium crenulatum*)	SC	No known occurrence	Inadequate habitat
Mountain grape-fern (*Botrychium montanum*)	SC	No known occurrence	Inadequate habitat
Twin spike moonwort (*Botrychium paradoxum*)	SC	No known occurrence	Inadequate habitat
Stalked moonwort (*Botrychium pedunculosum*)	SC	No known occurrence	Inadequate habitat
Clustered lady's-slipper (*Cypripedium fasciculatum*)	SC	No known occurrence	Inadequate habitat
Cronquist's stickseed (*Hackelia cronquistii*)	SC	No known occurrence	Inadequate habitat
Red-fruited desert parsley (*Lomatium erythrocarpum*)	SC	No known occurrence	Inadequate habitat
Cusick's lupine (*Lupinus lepidus var. cusickii*)	SC	No known occurrence	Inadequate habitat
Oregon semaphore grass (*Pleuropogon oregonus*)	SC	No known occurrence	Inadequate habitat
Snake River goldenweed (*Pyrrocoma radiata*)	SC	No known occurrence	Inadequate habitat
Biennial stanleya (*Stanleya confertifl*)	SC	No known occurrence	Inadequate habitat

(E) - Listed Endangered, (T) - Listed Threatened, (CH) - Critical Habitat has been designated for this species, (CS) - Candidate Species, (PE) – Proposed Endangered, (PT) - Proposed Threatened, (PCH) - Critical Habitat has been proposed for this species, (SC) - Species of Concern

A range survey was conducted on the allotment in 1963, which showed a carrying capacity as follows:

Acreage	Surveyed Carrying Capacity
Federal - 12,309	1,270 AUM
Private - 2,812	213 AUM
Totals 15,121 acres	1,483 AUM

BLM acres/AUM = 9.7

The allotment was adjudicated in 1965 at 2,383 AUMs. This was a 16% reduction in AUMs that was taken as the first step of a planned 62% reduction to meet the carrying capacity of 1,483 AUMs. An Allotment Management Plan (AMP) with a four-pasture rest rotation grazing system was implemented in 1966. The remainder of the scheduled reduction was never taken, apparently due to the implementation of the AMP. At that time, all use was by cattle. According to BLM records, permittee J disliked the type of bulls the other operators ran so he was allowed to switch to sheep use in 1972. In 1982, grazing decisions were issued which reduced permittee J, with his concurrence, from 385 AUMs to 200 AUMs. His sheep use was to be made on the steep slopes of Lawrence Creek, which the cattle seldom used, and was to alternate from the west side of Lawrence Creek one year to the east side of Lawrence Creek the next. High water in Lawrence Creek prevented him from getting the sheep across to the east side in some years resulting in more use on the west side, with a noticeable but undocumented reduction in the amount of forbs in the Lawrence Creek Pasture.

In 1986, permittee K acquired one of the existing permits, and at their request, their season of use was changed to spring and fall (4/16 to 5/25 and 10/16 to 12/5). When permittee K gathered their cattle on 5/25 they also had cattle belonging to permittee T. This resulted in T's cattle not being properly distributed after the gather, resulting in some areas being overgrazed while others were undergrazed.

To correct those problems some slight changes were made to the grazing schedule starting in 1990. T and K were allowed to turn out in separate pastures in the spring, to prevent the bunching up of cattle when K gathered theirs prior to removal on 5/25. J's sheep use would rotate through the entire allotment, but used a different pasture each year. They were scheduled to use the same pasture that T turned out in each year. In 1993, K fenced out some of their private land and some BLM land from the Holman Pasture on the lower end of Low Creek, thereby reducing their active use and exchange-of-use on the rest of the allotment.

Since 1996 permittee S has leased a portion of permittee T's AUMs. From 1996 to the present, no significant changes have been made to permittee leases. See Appendix 6, "Pritchard Creek Allotment #02074 AUMs and Utilization Information by Pasture" for detailed information, by pasture, of AUMs used each year.

A fire in 1998 resulted in part of Upper Pasture being excluded from grazing to assist in range recovery. Another fire in 2006 affected much of Upper and White Rock and a portion of Holman Pastures. Due to the 2006 fire, and the requirements in the Baker RMP for 2 years rest from grazing subsequent to fire, 31% of the available AUMs were temporarily reduced for a minimum of two growing seasons. As a result, the 2007 and 2008 AUMs total 1,494.

The permitted livestock use in the Pritchard Creek Allotment is displayed in the table below:

Table 3. Pritchard Creek Allotment Permitted Grazing Use

Permittee	Number of Livestock	Season of Use	AUMs
(K)	185 cattle	04/16-05/25	207
	300 cattle	10/20-12/09	428
(T)	150 cattle	05/01-07/15	375
		10/01-11/30	301
(S)	150 cattle	05/01-07/15	375
		10/01-11/30	301
(J)	825 sheep	05/01-05/31	168
	825 sheep	06/01-06/02	5
Total			**2,160 AUMs***

*Due to the 2006 fire, and the requirements in the Baker RMP for 2 years rest from grazing subsequent to fire, 31% of the available AUMs were temporarily reduced for a minimum of two growing season. As a result, in 2007 and 2008 AUMs total 1,494 for each year

The Current Grazing Plan in Pritchard Creek Allotment is shown below (1981 Allotment Management plan, Rev. 1997):

Current Use

The current active grazing preference remains at 2,198 AUMs however, the permitted use, as shown in Table 3 above, is 2,160 AUMs. The Standards and Guides assessment revealed that most Standards were not being met on the pastures due to livestock grazing. Therefore, this Evaluation document will recommend changes to grazing use in each pasture until Standards are met.

There were fires in one pasture in 1998 and in three pastures in 2006. White Rock and Holman Pastures are currently being rested for two growing seasons subsequent to the 2006 fire and consistent with the Baker RMP decisions.

Range Improvement Projects

There are 55 projects on the allotment, not including fences. Condition of water developments were rated as follows:

35 projects in good condition
3 projects in fair condition
7 projects in poor condition
10 projects in fail condition

Project inspections for all water developments including springs and reservoirs were completed in 2004. There were a total of 55 projects identified in the Pritchard Creek Allotment. There were also three projects identified as water developments on this allotment, which are actually located on private property. Of the 55 projects, 17 of these projects are in poor or failure condition. BLM plans to phase in maintenance by the permittees over the next 4 years to bring all of these projects up to a functional state. This will require repairing at least four projects each year while maintaining the rest of the projects. All fences on the exterior and interior of this allotment are in functional condition. Due to the 2006 fire, the BLM will need to replace 26 rock jacks that were destroyed. See APPENDIX 5: Summary of Range Projects for Pritchard Creek Allotment #02074 for a complete list of the range projects.

Table 4. Turnout and Pasture Move Dates

2004

Lawrence Creek	(K) 185C 4/16-5/25														(K) 305C 10/20-12/09							
Upper		(J) 825S 5/01-5/31																				
White Rock		(T/S) 300C 5/01-7/15																				
Holman														(T/S) 300C 10/01-11/30								

2005

Lawrence Creek		(J) 825S 5/01-5/31																				
Upper	(K)180C 4/16-5/25														(K) 300C 10/20-12/09							
White Rock		(T/S) 300C 5/01-7/15																				
Holman														(T/S) 300C 10/01-11/30								

2006

Lawrence Creek		(T/S) 300C 5/01-7/15																				
Upper		(J) 825S 5/01-5-31																				
White Rock	(K) 180C 4/16-5/25														*(K) 205C 10/10-11/30							
Holman														*(T/S) 206C 10/10-11/30								

3.10 Special Management Areas

3.10.1 Areas of Critical Environmental Concern / Research Natural Areas (ACECs/RNAs)

There are no ACECs or RNAs in the Pritchard Creek Allotment.

3.10.2 Wilderness Study Areas (WSAs)

There are no WSAs in the Pritchard Creek Allotment.

3.10.3 Wilderness Characteristics Outside of WSAs

There are no Wilderness Characteristics outside of WSAs in the Pritchard Creek Allotment.

3.10.4 Wild and Scenic Rivers (WSRs)

There are no WSRs in the Pritchard Creek Allotment.

4 Rangeland Health Assessment and Determinations

4.1 Table 5. Standards Determinations Summary for All Grazing Allotment Pastures

All the data and other indicators used to evaluate status of the Standards and analyze information to make the decisions above can be found in the completed field forms and are summarized in the allotment evaluations, the Determination and Recommendations documents, and this Evaluation and Determination. See Appendix 3, "Summary of 2004 Rangeland Health Evaluations for Pritchard Creek Allotment 02074-Departure from Ecological Site Descriptions/Reference Areas" for the summary of completed Determinations and Recommendations documents.

Table 5. Standards Determinations Summary for All Grazing Allotment Pastures

Pasture Name	Standard 1 Watershed Function - Uplands	Standard 2 Watershed Function - Riparian	Standard 3 Ecological Processes	Standard 4 Water Quality	Standard 5 Native, T&E, or Locally Important Issues
Holman	Not met*	Not met*	Not met*	Not met*	Plants - Not met* Animals - Not met*
Lawrence	Met	Not met*	Not met*	Not met*	Met
Upper	Not met *	Not met*	Not met*	Not met*	Plants - Not met* Animals - Not met*
White Rock	Met	Not met*	Not met*	Not met*	Plants - Not met* Animals - Not met*

* Standards that are not being met due to current livestock grazing.

Table 6. Pastures That Failed to Meet Rangeland Health Standards and Reasons Standards Were Not Met

Pasture	Rating Date	Standard Evaluated	Standard Met or Not Met	Reason	Comments
Holman	1/25/04	1-Uplands	Not met	Livestock	Lack of adequate vegetation for stability of upland soils Increase in annual grasses Stand removing fire in the upland watershed left it in poor condition
	1/26/04	2-Riparian	Not met	Livestock	Livestock a significant factor. Lack of adequate amounts and/or diversity of riparian species and lack of woody species Bank trampling by livestock Heavy utilization by livestock Active head and down cutting of stream channels Dewatering of springs and seeps adjacent to stream channels
	1/26/04	3-Ecological Processes	Not met	Livestock	Bunchgrass low vigor, salt blocks poorly located, increase in weeds and annuals Other resource problems (wildlife, recreation, etc) Historical grazing resulted in decline in plant communities Low plant vigor on native bunchgrasses, and abundance of annual grasses Invasive weeds restricting health and production of several sites
	1/26/04	4-Water	Not met	Livestock	Reasons as stated above in Standard 1 & 2
	1/27/04	5-Habitats/Plants	Not met	Livestock	Vegetation Standards not met in Uplands, Riparian, and Ecological Processes Spread of annual grasses and noxious weeds into riparian areas Perennial grass communities stressed, creating low vigor Lack of diversity of riparian species
		Habitats/Wildlife	Not met		Percent of sagebrush is adequate for wildlife species, but understory conditions are not adequate for wildlife species.

4.2 Table 6. Pastures That Failed to Meet Rangeland Health Standards and Reasons Standards Were Not Met

Pasture	Rating Date	Standard Evaluated	Standard Met or Not Met	Reason	Comments
Lawrence	3/27/03	1-Uplands	Met		Upward trend; Standards met
	3/27/03	2-Riparian	Not met	Livestock	Livestock a significant factor Lack of adequate amounts and/or diversity of riparian species and lack of woody species Head cutting, springs and stream channels dewatered, few riparian species present Bank trampling by livestock Heavy utilization by livestock Active head and down cutting of stream channels Dewatering of springs and seeps adjacent to stream channels
	3/28/03	3-Ecological Processes	Not met	Livestock	Standards 1&2 not met, salt areas poorly located Other resource problems (wildlife, recreation, etc) Historical grazing resulted in declines in plant communities Low plant vigor on native bunchgrasses and abundance of annual grasses Invasive weeds restricting health and production of several sites
	3/28/03	4-Water	Not met	Livestock	Lack of vegetation and channel structure to protect stream channels and banks during spring runoff and summer thunderstorm events High temperature levels and fecal matter levels in Pritchard Creek and Lawrence Creek
	3/28/03	5-Habitats/Plants	Met		Meets standard
		Habitats/Wildlife	Met		Meets standard

Pasture	Rating Date	Standard Evaluated	Standard Met or Not Met	Reason	Comments
Upper	3/26/03	1-Uplands	Not met	Livestock and Fire	Lack of adequate vegetation for stability of upland soils Increase in annual grasses Stand removing fire in the upland watershed left it in poor condition
		2-Riparian	Not met	Livestock	Livestock a significant factor Lack of adequate amounts and/or diversity of riparian species and lack of woody species Bank trampling by livestock Heavy utilization by livestock Active headcutting and down-cutting of stream channels Dewatering of springs and seeps adjacent to stream channels
	3/26/03	3-Ecological Processes	Not met	Livestock and Fire	Other resource problems (wildlife, recreation) Historical grazing resulted in declines in plant communities Low plant vigor on native bunchgrasses and abundance of annual grasses Invasive weeds restricting health and production of several sites
	3/26/03	4-Water	Not met	Livestock	Water quality not met, increased width/depth ratio, bank trampling, increased water temperature Lack of vegetation and channel structure to protect stream channels and banks during spring runoff and summer thunderstorm events High temperature levels and fecal matter levels in Pritchard Creek and Lawrence Creek
	3/26/03	5-Habitats/Plants	Not met	Livestock	Spread of annual grasses and noxious weeds into riparian areas Perennial Grass Communities stressed, creating low vigor Lack of diversity on riparian species. bare ground too high
		Habitat/Wildlife	Not met	Livestock	Percent of Sagebrush is adequate for wildlife species but understory conditions are not adequate for wildlife species

Pasture	Rating Date	Standard Evaluated	Standard Met or Not Met	Reason	Comments
White Rock	3/13/03	1-Uplands	Met		Standards met
	3/13/03	2-Riparian	Not met	Livestock	Livestock a significant factor Lack of adequate amounts and/or diversity of riparian species and lack of woody species Bank trampling by livestock Heavy utilization by livestock Active headcutting and down-cutting of stream channels Dewatering of springs and seeps adjacent to stream channels
	3/13/03	3-Ecological Processes	Not met	Livestock	Salt sites poorly located Other resource problems (wildlife, recreation) Historical grazing resulted in declines in plant communities Low plant vigor on native bunchgrasses and abundance of annual grasses Invasive weeds restricting health and production of several sites
	3/13/03	4-Water	Not met	Livestock	Water quality standards not met, high width/depth ratio, lack of vegetation, bank trampling, high water temp, low O2 Lack of vegetation and channel structure to protect stream channels and banks during spring runoff and summer thunderstorm events High temperature levels and fecal matter levels in Pritchard Creek and Lawrence Creek
	3/13/03	5-Habitats/ Plants	Not met	Livestock	Spread of annual grasses and noxious weeds into riparian areas Perennial Grass Communities stressed, creating low vigor Lack of diversity on riparian species
		Habitats/Wildlife	Not met	Livestock	Percent of sagebrush meets wildlife Standards This standard was not met in conjunction with wildlife species

4.3 Summary of Standards and Guidelines Evaluations by Pasture

Holman Pasture

The 'departure from the expected' rating for soil stability in this pasture is rated as "none to slight" on two of the five field evaluations and "slight to moderate" on the other three evaluations.

The 'departure from the expected' rating for hydrologic function is "none to slight" on two of the five evaluations and "slight to moderate" on the other three. Even though this pasture is in a 12- to 16-inch annual precipitation zone, little evidence of water erosion was observed. Approximately 50% of the soil types in the pasture are slightly to moderately divergent from the reference sites. Standard 4 (water quality) is at risk of a non-functional rating with increased grazing use on specific soils, and/or with heavy runoff from snowmelt.

Evaluations concluded there were adequate amounts and/or diversity of riparian species for stream stability. Heavy use of riparian areas by livestock is contributing to non-attainment of Standard 2 (watershed function), with potential for these areas to degrade significantly with heavier grazing use and heavy runoff. Heavy grazing use of riparian areas would continue to decrease the vegetation necessary to maintain proper functioning condition of riparian areas.

Lawrence Pasture

The 'departure from the expected' rating for soil stability in this pasture is rated as "none to slight" on four of the seven field evaluations and "slight to moderate" on the other three. Wind erosion was noticeable on the ridge soils, and other soil types in the pasture have an increase in erosion seen as bare ground and rock.

The 'departure from the expected' rating for hydrologic function is "none to slight" on four of the seven evaluations and "slight to moderate" on the other three. Even though this is in a 12- to 16-inch annual precipitation zone, little evidence of water erosion was observed, except on the steeper south slopes and lower west slopes of the pasture.

Evaluations concluded that surface water quality standards were not met due to lack of vegetation and lack of structure in stream channels, the large drainage area, steep slopes, high spring flows, and summer thunderstorm events.

Evaluations concluded there were not adequate amounts and/or diversity of riparian species for stream stability. Active headcuts and bank trampling were increasing channel instability. With the large drainage area, steep terrain, high spring flows, and summer thunderstorms, it will be difficult for the lower portions of Lawrence and Pritchard Creeks to maintain an upward trend for any length of time.

Upper Pasture

The 'departure from expected' rating for soil stability is "none to slight" on four of the six field evaluations and "slight to moderate" on the other two. Wind erosion was noticeable on the ridge soil, and this has led to an increase in bare ground and rock. The steeper soils showed signs of slippage caused by fire and cattle trailing.

The 'departure from expected' rating for hydrologic function is "none to slight" on five of the six evaluations and "slight to moderate" on the other one. Even though this is in an annual 12- to 16-inch precipitation zone, there is little evidence of water erosion and wind erosion and steeper slopes were more of a factor.

Evaluations concluded that surface water quality standards are not being met. There is not enough vegetation and channel structure to protect the stream channel and banks during spring runoff and summer thunderstorm events.

Evaluations concluded there were not adequate amounts and/or diversity of riparian species for stream stability. Active headcuts and bank trampling were increasing channel instability.

White Rock Pasture

The 'departure from the expected' rating for soil stability is "none to slight" on three of the five field evaluations and "slight to moderate" on the other two. Wind erosion was noticeable on the ridge soils and has led to an increase in bare ground and rock.

The 'departure from the expected' rating for hydrologic function is "none to slight" on three of the five evaluations and "slight to moderate" on the other two. Even though this is in an annual 12- to 16-inch precipitation zone, little evidence of water erosion was observed and wind erosion was more of a factor.

Evaluations concluded there were not adequate amounts and/or diversity of riparian species for stream stability. Active headcuts and bank trampling were increasing the channel instability.

5 Proposed Activity Plan Objectives for the Assessment and Evaluation Area

The following *objectives* for Pritchard Creek Allotment were identified in the Baker Resource Area RMP and guide this Evaluation document and the Determinations:

Upland Objectives

Manage upland grass-shrub vegetation to achieve a mid-seral stage plant community.
Improve upland habitat conditions for sage-grouse, antelope, and mule deer.

Riparian Objectives

Improve and maintain, where suitable, wet meadows for sage-grouse and antelope.
Enhance fishery habitat for trout on Lawrence Creek and Pritchard Creek.
Improve the condition of riparian habitats.

Make progress towards meeting Standards and Guidelines for each of the five Standards, in all pastures.

The following *management actions* were identified in the Baker Resource Area RMP:

Upland

Monitor and evaluate the grazing system. Adjust the grazing system and stocking level as appropriate to maintain upland vegetation objectives.
Modify the grazing system to increase forbs in upland wildlife habitat areas.
Defer livestock grazing three to five growing seasons on range rehabilitation project areas.

Riparian

Continue riparian surveys.
Fence selected bogs, seeps, streams, and meadows.
Inventory the fishery resource.
Install structures in selected streams.
Plant shrubs in selected exclosures.
Establish monitoring studies on vegetation and fisheries.
Restore deteriorated habitat through modification of grazing systems.

Make progress towards meeting Standards and Guidelines for each of the five Standards, in all pastures.

6 General Recommendations for Assessment and Evaluation Area

Based on the findings from the Standards and Guidelines, BLM recommends the following changes to meet the allotment objectives:

1. Implement a range improvement project maintenance schedule to repair and maintain all range projects. Complete 20% each year for 4 years.
2. Construct new range improvement projects to facilitate improved management.
3. Implement utilization levels as follows: 50% on upland native bunchgrasses, 45% on riparian herbaceous plants, and 30% on riparian shrub component.
4. Adjust current grazing season or livestock numbers where needed to allow for implementation of the above utilization standards.
5. Implement reduction in livestock numbers to accommodate available forage throughout the allotment.
6. Implement deferred rotation pasture grazing system.

7 Brief Chronology and Summary of Public Involvement

BLM first disclosed the proposed sequence and methods for GU evaluations to the public, as part of the Baker RMP scoping process. GU evaluations were discussed with the public prior to the Prichard Creek assessment through the Baker RMP public involvement process as described on page 7 of the Record of Decision document (July 1989).

Before fieldwork began on the Pritchard Creek Standards and Guides in 2002, BLM invited the permittees to participate in the Standards and Guidelines evaluation. Some did participate. BLM met with the permittees in the fall of 2006 to discuss the preliminary findings from the assessment. BLM met again with the permittees in January 2007 to discuss the proposed recommendations for management actions.

Letters notifying the public, newspapers, permittees, other agencies, and tribal representatives regarding the process and the upcoming public meeting, were sent out in early May. The BLM offered to meet individually with the tribes involved. No response was received from anyone notified. A public meeting was held on May 15, 2007 to provide an overview of the process, distribute the draft Assessment and Determinations document and answer questions

BLM accepted comments on the draft Assessment and Determinations through June 15. One comment letter was received. This comment acknowledged the BLM process and provided input regarding livestock grazing impacts. It further stated an apparent contradiction regarding the BLM analysis of sage-grouse habitat. BLM has modified the document to provide a clearer explanation of that issue.

8 Interested Public

Permittees and the Hells Canyon Preservation Council have requested to be notified of further actions affecting this allotment and GU.

9 Evaluation Authors

Staff Member	Profession	Education	Experience
Nancy Lull	Field Manager	B.A. Journalism, Boise State University	BLM 21 years
Gary Guymon	Rangeland Management Specialist	B.S. Range Science, Oregon State University	BLM 17 years
Craig Martell	Rangeland Management Specialist	B.S. Ag Production/Range Science, Montana State University	BLM 22 years
Pat Merrill	Range Technician	AAS, Range Management, Treasure Valley Community College	BLM 14 years
Greg Miller (retired)	Wildlife Biologist		
Melissa Yzquierdo	Wildlife Biologist	B.S. Wildlife Resources, Microbiology and Rangeland Ecology Management, University of Idaho	BLM 7 years
Todd Kuck	Hydrologist / Soil Scientist/ Supervisory NRS	B.S. Forest Resources Management, University of Montana	BLM 17 years
Mike Woods	District Noxious Weed Coordinator	B.S. Rangeland Resources, Oregon State University	BLM 33 years
Mary Oman	Archaeologist	M.A. Anthropology, University of Missouri	BLM 20 years
Dorothy Mason	Wildlife Biologist/ Document Preparer	B.S. Wildlife/Recreation/ Range and Natural Resources, University of Nevada - Reno	BLM 32 years
Clair Button (retired)	Botanist		
Roger Ferriel	Botanist	B.A. Botany, The University of Montana; MS Resource Conservation, The University of Montana	BLM 6 years
Jackie Dougan	Fisheries Biologist	B.S. Fisheries, Oregon State University	BLM 10 years; USFS 20 years

10 References

Hagen, C.A. 2005. Greater sage-grouse conservation assessment and strategy for Oregon: a plan to maintain and enhance populations and habitat. Oregon Department of Fish and Wildlife, Salem, Oregon.

Oregon, Baker County. 1997. *Baker County Soil Survey.*

U.S. Department of the Interior, Bureau of Land Management. 1989. *Baker Resource Management Plan Record of Decision Rangeland Program Summary.* Vale, Oregon: Vale District BLM Office.

U.S. Department of the Interior, Bureau of Land Management. 1993. Process for assessing Proper Functioning Conditions. *Technical Reference* 1737-9.

U.S. Department of the Interior, Bureau of Land Management. 1996. *Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration.* 43CFR4180.1-2. Washington DC: United States Government Printing Office.

U.S. Department of the Interior, Bureau of Land Management. 1996. Sampling vegetation attributes. *Interagency Technical Reference*, BLM/RS/ST-96/002+1730.

U.S. Department of the Interior, Bureau of Land Management. 1997. *Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington.*

U.S. Department of the Interior, Bureau of Land Management. 1998. A user guide to assessing Proper Functioning Condition and supporting science for lentic areas. *Technical Reference* 1737-16.

U.S. Department of the Interior, Bureau of Land Management. 1998. Riparian area management, a user guide to assessing Proper Functioning Condition and supporting science for lotic areas. *Technical Reference* 1737-15.

U.S. Department of the Interior, Bureau of Land Management. 2000. *Vale District Planning Update, Baker Resource Area.* Vale, Oregon: Vale District BLM Office.

U.S. Department of the Interior, Bureau of Land Management. 2005. Interpreting indicators of rangeland health. *Technical Reference* 1734-6 Version 4. Washington DC: United States Government Printing Office.

11 Supporting Information

11.1 Maps

Map 1 - Geographic Units in the Baker Resource Area Management Plan (1989)

Map 2 - Map of the Pritchard Creek Allotment/Geographic Unit

11.2 Appendices

Appendix 1: Rangeland Health Standards - Fundamentals of Rangeland Health

Appendix 2: Standards and Indicators Used for OR/WA Evaluations

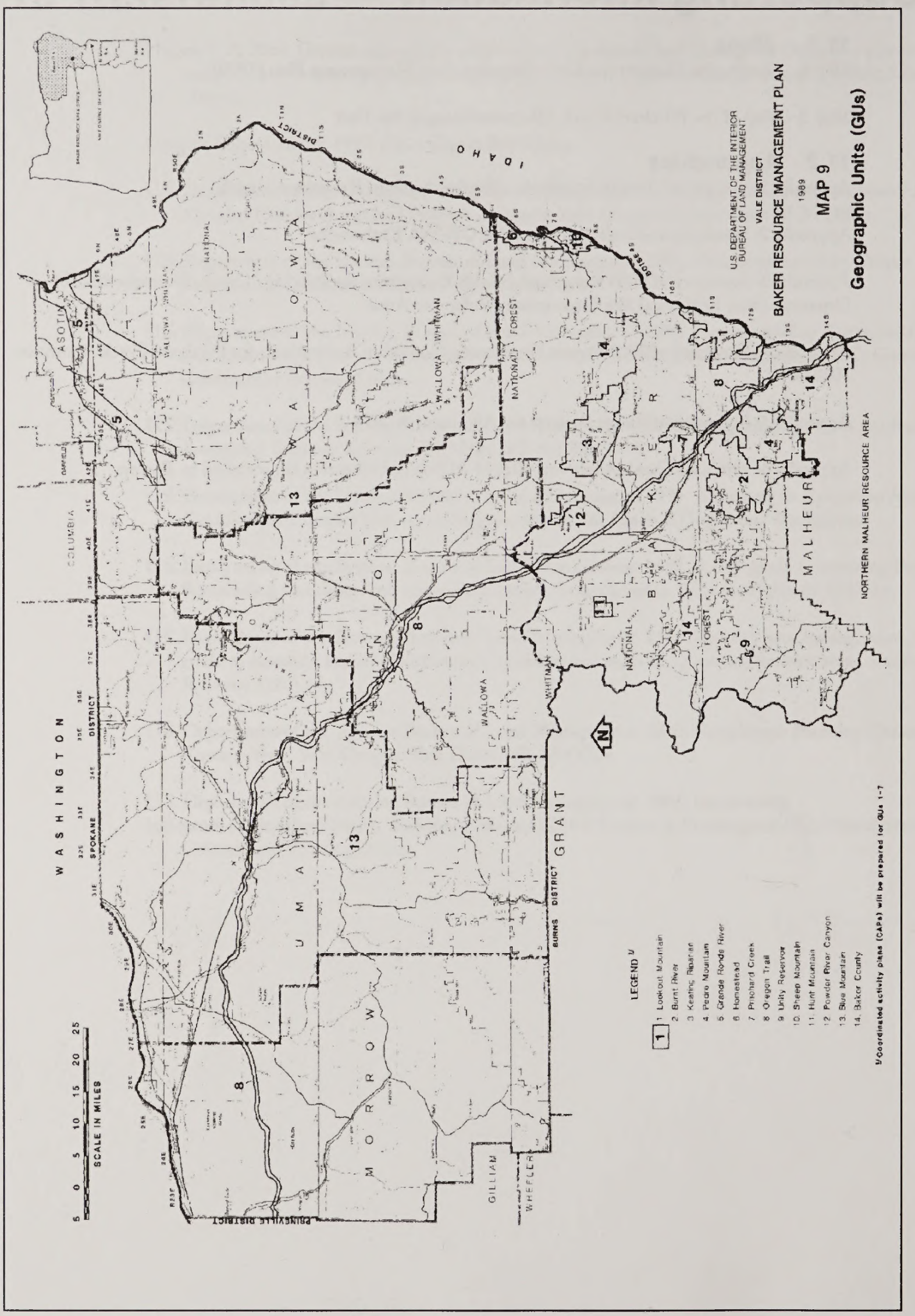
Appendix 3: Summary of 2004 Rangeland Health Evaluations for Pritchard Creek Allotment #02074 - Departure from Ecological Site Descriptions/Reference Areas

Appendix 4: Summary of 2002 Proper Functioning Condition Assessments for Pritchard Creek Allotment #02074

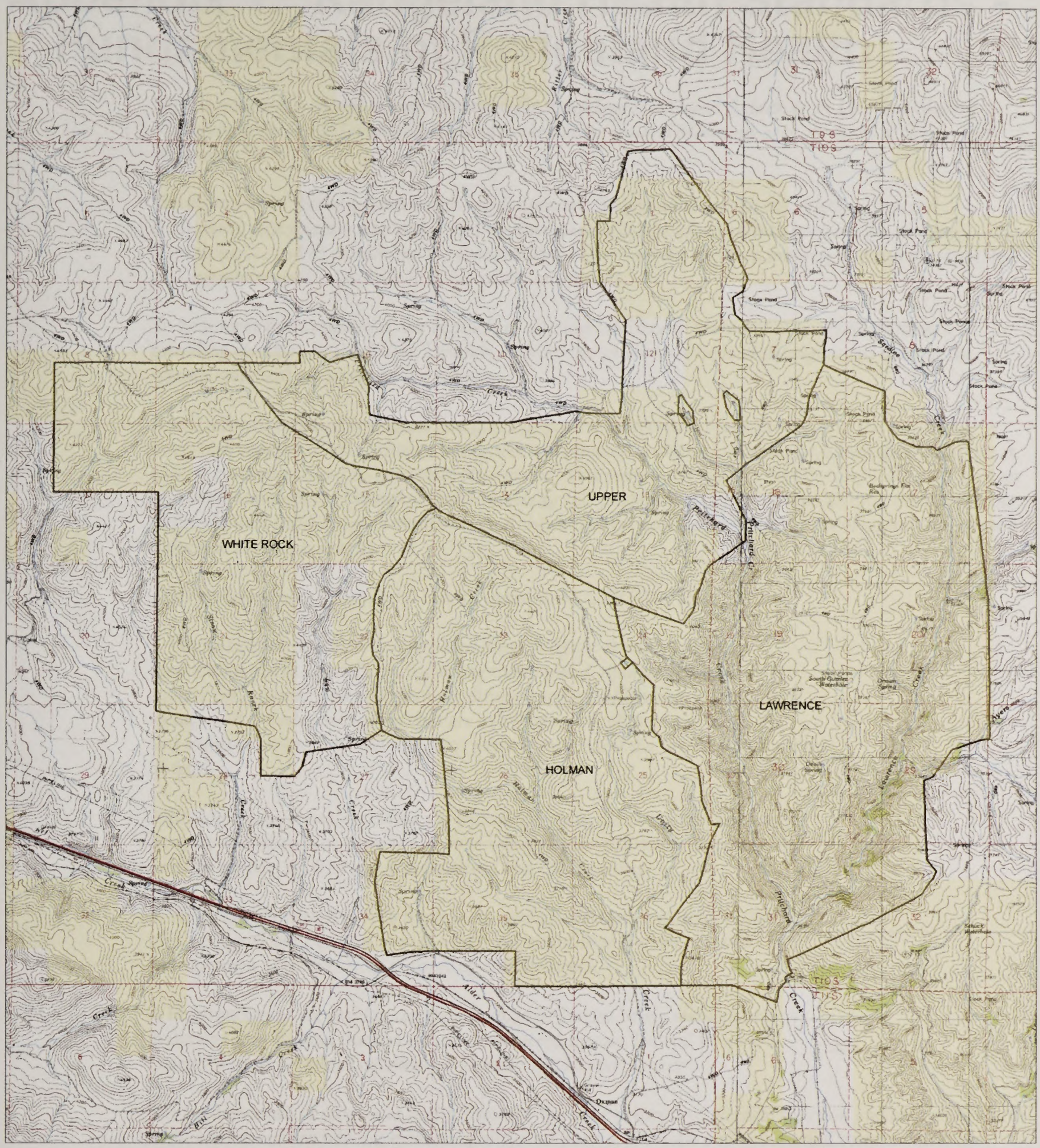
Appendix 5: Summary of Range Projects for Allotment #02074

Appendix 6: Pritchard Creek Allotment #02074 AUMs & Utilization Information by Pasture

MAP 1. Geographic Units in the Baker Resource Area Management Plan (1989)



MAP 2. Map of the Pritchard Creek Allotment/Geographic Unit



U.S. DEPARTMENT OF THE INTERIOR

Bureau of Land Management

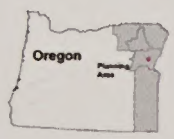
VALE DISTRICT

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

Mxd: S:\BRA_GU\7_Pritchard_Creek\7_GIS\Maps\Pritchard_GU.mxd

1:14,200

Pritchard Creek
Geographical Unit
Area Evaluation
2007



Legend

Springs

Ownership

BL

PV

Allotments

Interstate 84

Appendix 1: Rangeland Health Standards - Fundamentals of Rangeland Health

The following text is excerpted from "Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington" (1997).

The objectives of the rangeland health regulations are: "to promote healthy sustainable rangeland ecosystems; to accelerate restoration and improvement of public rangelands to properly functioning conditions; . . . and to provide for the sustainability of the western livestock industry and communities that are dependent upon productive, healthy public rangelands."

To help meet these objectives, the regulations on rangeland health identify fundamental principles providing direction to the States, Districts, and on-the-ground public land managers and users in the management and use of rangeland ecosystems.

A hierarchy, or order, of ecological function and process exists within each ecosystem. The rangeland ecosystem consists of four primary, interactive components: a physical component, a biological component, a social component, and an economic component. This perspective implies that the physical function of an ecosystem supports the biological health, diversity and productivity of that system. In turn, the interaction of the physical and biological components of the ecosystem provides the basic needs of society and supports economic use and potential.

The Fundamentals of Rangeland Health stated in 43 CFR 4180 are:

1. Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity and the timing and duration of flow.

2. Ecological processes, including the hydrologic cycle, nutrient cycle and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.

3. Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established Bureau of Land Management objectives such as meeting wildlife needs.

4. Habitats are, or are making significant progress toward being, restored or maintained for Federal threatened and endangered species, Federal Proposed, Category 1 and 2 Federal candidate and other special status species.

The fundamentals of rangeland health combine the basic precepts of physical function and biological health with elements of law relating to water quality, and plant and animal populations and communities. They provide direction in the development and implementation of the standards for rangeland health.

Appendix 2: OR/WA BLM Standards and Indicators for Rangeland Health

Standard 1 Watershed Function – Uplands
Upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate and landform.

Rationale and Intent
This standard focuses on the basic physical functions of upland soils that support plant growth, the maintenance or development of plant populations and communities, and promote dependable flows of quality water from the watershed.

To achieve and sustain rangeland health, watersheds must function properly. Watersheds consist of three principle components: the uplands, riparian/wetland areasand the aquatic zone. This standard addresses the upland component of thewatershed. When functioning properly, within its potential, a watershed captures, stores and safely releases the moisture associated with normal precipitation events (equal to or less than the 25 year, 5 hour event) that falls within its boundaries. Uplands make up the largest part of the watershed and are where most of the moisture received during precipitation events is captured and stored.

While all watersheds consist of similar components and processes, each is unique in its individual makeup. Each watershed displays its own pattern of landform and soil, its unique climate and weather patterns, and its own history of use and current condition. In directing management toward achieving this standard, it is essential to treat each unit of the landscape (soil, ecological site, and watershed) according to its own capability and how it fits with both smaller and larger units of the landscape.

A set of potential indicators has been identified for which site-specific criteria will be used to determine if this standard is being met. The appropriate indicators to be used in determining attainment of the standard should be drawn from the following list.

Potential Indicators
Protection of the soil surface from raindrop impact; detention of overland flow; maintenance of infiltration and permeability, and protection of the soil surface from erosion, consistent with the potential/capability of the site, as evidenced by the:

- amount and distribution of plant cover (including forest canopy cover);
- amount and distribution of plant litter;
- accumulation/incorporation of organic matter;
- amount and distribution of bare ground;
- amount and distribution of rock, stone, and gravel;
- plant composition and community structure;
- thickness and continuity of A horizon;
- character of microrelief;
- presence and integrity of biotic crusts;
- root occupancy of the soil profile;
- biological activity (plant, animal, and insect); and
- absence of accelerated erosion and overland flow.

Soil and plant conditions promote moisture storage as evidenced by:

- amount and distribution of plant cover (including forest canopy cover);

- amount and distribution of plant litter;
- plant composition and community structure; and
- accumulation/incorporation of organic matter.

Standard 2 Watershed Function - Riparian/Wetland Areas
Riparian-wetland areas are in properly functioning physical condition appropriate to soil, climate, and landform.

Rationale and Intent
Riparian-wetland areas are grouped into two major categories: 1. lentic, or standing water systems such as lakes, ponds, seeps, bogs, and meadows; and 2. lotic, or moving water systems such as rivers, streams, and springs. Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and which under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Riparian areas commonly occupy the transition zone between the uplands and surface water bodies (the aquatic zone) or permanently saturated wetlands.

Properly functioning condition of riparian and wetland areas describes the degree of physical function of these components of the watershed. Their functionality is important to water quality in the capture and retention of sediment and debris, the detention and detoxification of pollutants, and in moderating seasonal extremes of water temperature. Properly functioning riparian areas and wetlands enhance the timing and duration of streamflow through dissipation of flood energy, improved bank storage, and ground water recharge. Properly functioning condition should not be confused with the Desired Plant Community (DPC) or the Desired Future Condition (DFC) since, in most cases, it is the precursor to these levels of resource condition and is required for their attainment.

A set of indicators has been identified for which site-specific criteria will be used to determine if this standard is being met. The criteria are based upon the potential (or upon the capability where potential cannot be achieved) of individual sites or land forms.

Potential Indicators
Hydrologic, vegetative, and erosional/depositional processes interact in supporting physical function, consistent with the potential or capability of the site, as evidenced by:

- frequency of floodplain/wetland inundation;
- plant composition, age class distribution, and community structure;
- root mass;
- point bars revegetating;
- streambank/shoreline stability;
- riparian area width;
- sediment deposition;
- active/stable beaver dams;
- coarse/large woody debris;
- upland watershed conditions;
- frequency/duration of soil saturation; and
- water table fluctuation.

Stream channel characteristics are appropriate for landscape position as evidenced by:

- channel width/depth ratio;

- channel sinuosity;
- gradient;
- rocks and coarse and/or large woody debris;
- overhanging banks;
- pool/riffle ratio;
- pool size and frequency; and
- stream embeddedness.

Standard 3 Watershed Function - Ecological Processes
Healthy, productive and diverse plant and animal populations and communities appropriate to soil, climate and landform are supported by ecological processes of nutrient cycling, energy flow and the hydrologic cycle.

Rationale and Intent
This standard addresses the ecological processes of energy flow and nutrient cycling as influenced by existing and desired plant and animal communities without establishing the kinds, amounts or proportions of plant and animal community compositions. While emphasis may be on native species, an ecological site may be capable of supporting a number of different native and introduced plant and animal populations and communities while meeting this standard. This standard also addresses the hydrologic cycle which is essential for plant growth and appropriate levels of energy flow and nutrient cycling. Standards 1 and 2 address the watershed aspects of the hydrologic cycle.

With few exceptions, all life on earth is supported by the energy supplied by the sun and captured by plants in the process of photosynthesis. This energy enters the food chain when plants are consumed by insects and herbivores and passes upward through the food chain to the carnivores. Eventually, the energy reaches the decomposers and is released as the thermal output of decomposition or through oxidation.

The ability of plants to capture sunlight energy, to grow and develop, to play a role in soil development and watershed function, to provide habitat for wildlife and to support economic uses depends on the availability of nutrients and moisture. Nutrients necessary for plant growth are made available to plants through the decomposition and metabolization of organic matter by insects, bacteria and fungi, the weathering of rocks and extraction from the atmosphere. Nutrients are transported through the soil by plant uptake, leaching and by rodent, insect and microbial activity. They follow cyclical patterns as they are used and reused by living organisms.

The ability of rangelands to supply resources and satisfy social and economic needs depends on the buildup and cycling of nutrients over time. Interrupting or slowing nutrient cycling can lead to site degradation, as these lands become increasingly deficient in the nutrients plants require.

Some plant communities, because of past use, frequent fire or other histories of extreme or continued disturbance, are incapable of meeting this standard. For example, shallow-rooted winter-annual grasses that completely dominate some sites do not fully occupy the potential rooting depth of some soils, thereby reducing nutrient cycling well below optimum levels. In addition, these plants have a relatively short growth period and thus capture less sunlight than more diverse plant communities. Plant communities like those cited in this example are considered to have crossed the threshold of recovery and often require great expense to be recovered. The cost of recovery must be weighed against the site's potential ecological/economic value in establishing treatment priorities.

The role of fire in natural ecosystems should be considered, whether it acts as a primary driver or only as one of many factors. It may play a significant role in both nutrient cycling and energy flows.

A set of indicators has been identified for which site-specific criteria will be used to determine if this standard is being met.

Potential Indicators
Photosynthesis is effectively occurring throughout the potential growing season, consistent with the potential/capability of the site, as evidenced by plant composition and community structure.

Nutrient cycling is occurring effectively, consistent with the potential/capability of the site, as evidenced by:

- plant composition and community structure;
- accumulation, distribution, incorporation of plant litter and organic matter into the soil;
- animal community structure and composition;
- root occupancy in the soil profile; and
- biological activity including plant growth, herbivory, and rodent, insect and
- microbial activity.

Standard 4 Water Quality
Surface water and groundwater quality, influenced by agency actions, complies with State water quality standards.

Rationale and Intent
The quality of the water yielded by a watershed is determined by the physical andchemical properties of the geology and soils unique to the watershed, the prevailingclimate and weather patterns, current resource conditions, the uses to which the land isput and the quality of the management of those uses. Standards 1, 2 and 3 contributeto attaining this standard.

States are legally required to establish water quality standards and Federal landmanagement agencies are to comply with those standards. In mixed ownershipwatersheds, agencies, like any other land owners, have limited influence on the qualityof the water yielded by the watershed. The actions taken by the agency will contributeto meeting State water quality standards during the period that water crosses agencyadministered holdings.

Potential Indicators
- Water quality meets applicable water quality standards as evidenced by:
- water temperature;
- dissolved oxygen;
- fecal coliform;
- turbidity;
- pH;
- populations of aquatic organisms; and
- effects on beneficial uses (i.e., effects of management activities on beneficial uses as defined under the Clean Water Act and State implementing regulations).

Standard 5 Native, T&E, and Locally Important Species
Habitats support healthy, productive and diverse populations and communities of native plants and animals (including special status species and species of local importance) appropriate to soil, climate and landform.

Rationale and Intent

Federal agencies are mandated to protect threatened and endangered species and willtake appropriate action to avoid the listing of any species. This standard focuses onretaining and restoring native plant and animal (including fish) species, populations andcommunities (including threatened, endangered and other special status species andspecies of local importance). In meeting the standard, native plant communities andanimal habitats would be spatially distributed across the landscape with a density andfrequency of species suitable to ensure reproductive capability and sustainability. Plantpopulations and communities would exhibit a range of age classes necessary to sustainrecruitment and mortality fluctuations.

Potential Indicators

Essential habitat elements for species, populations and communities are present and available, consistent with the potential/capability of the landscape, as evidenced by:

- plant community composition, age class distribution, productivity;
- animal community composition, productivity;
- habitat elements;
- spatial distribution of habitat;
- habitat connectivity;
- population stability/resilience.

Appendix 3: Summary of 2002 Rangeland Health Evaluations for Pritchard Creek Allotment #02074 Departure from Ecological Site Descriptions/Reference Areas

White Rock Pasture: 05 Sites

Rangeland Health Attributes	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
Soil/Site Stability			2 Sites	3 Sites
Hydrologic Function			2 Sites	3 Sites
Biotic Integrity			3 Sites	2 Sites

RANGE SITES: 100% OF SITES IN THE PASTURE
1. Mountain North (46D)
2. Shallow South (143D)
3. Mountain South (47D)
4. Mountain Clayey (45C)

Upper Pasture: 06 Sites

Rangeland Health Attributes	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
Soil/Site Stability			2 Sites	4 Sites
Hydrologic Function				6 Sites
Biotic Integrity			3 Sites	3 Sites

RANGE SITES: 100% OF SITES IN THE PASTURE
1. Steep Mountain South (47E)
2. Steep Mountain North (46E)
3. Mountain North (46D)
4. Mountain Clayey (45C)
5. Mountain South (47E)

Holman Pasture: 05 Sites

Rangeland Health Attributes	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
Soil/Site Stability			3 Sites	2 Sites
Hydrologic Function			3 Sites	2 Sites
Biotic Integrity			3 Sites	2 Sites

RANGE SITES: 100% OF SITES IN THE PASTURE
1. Mountain North (46D)
2. Mountain Shallow South (7D, 6C)
3. Mountain Clayey (45C)
4. Steep Mountain North (46E)
5. South Clayey (51D)

Lawrence Creek Pasture: 07 Sites

Rangeland Health Attributes	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
Soil/Site Stability			3 Sites	3 Sites
Hydrologic Function			3 Sites	3 Sites
Biotic Integrity	1 Site		3 Sites	2 Sites

RANGE SITES: 100% OF SITES IN THE PASTURE

1. Mountain North (46D)
2. Steep Mountain South (47E)
3. Mountain Clayey (45C)
4. Mountain South (47D)

Appendix 4: Summary of 2002 Proper Functioning Condition Assessments for Pritchard Creek Allotment #02074

Holman Pasture:

Creek	PFC	FARU	FARD	FARN	NF
Holman Creek	0.75 miles/34%	1.15 miles/51%	0.35 miles/ 15%		
Holman Creek T1		0.90 mile/100%			
Holman Creek T2	0.60 miles/100%				
Alder Creek T1				0.20miles/100%	
Alder Creek T2				0.15miles/100%	
Unity Creek Excl				3.0 acres	
Unity Creek		1.06 miles/71%	0.32 miles/21%		0.10 miles/8%
Total Miles	1.35 miles/24%	3.11 miles/55%	0.67 miles/12%	0.35 miles/7%	0.10 miles/2%
Total Acres				3.0 acres/100%	

White Rock Pasture:

Creek	PFC	FARU	FARD	FARN	NF
Low Creek			0.5 miles/100%		
Low Creek East Fork			0.33 miles/100%		
Straw Ranch Creek	1.80 miles/75%			0.33 miles/14%	0.25miles/11%
Straw Ranch Creek T1		1.25 miles/100%			
Straw Ranch Creek West Fork			0.33 miles/100%		
Alder Creek T1			0.75 miles/100%		
Alder Creek Excl			3.0 acres		
Alder Creek T2			1.30 miles/100%		
Total Miles	1.80 miles/27%	1.25 miles/18%	3.21 miles/47%	0.33 miles/4%	0.25 miles/4%
Total Acres			3.0 acres		

Upper Pasture:

Creek	PFC	FARU	FARD	FARN	NF
Pritchard Creek		0.20 miles/25%	0.60 miles/75%		
Pritchard Creek T1			0.25 miles/44%	0.31 miles/56%	
Pritchard Creek T3	0.25 miles/28%			0.65 miles/72%	
Pritchard Cr T1-T3				0.09 miles/100%	
Pritchard Creek Excl T4	9.0 acres/100%				
Pritchard Creek T4			0.30 miles/54%	0.25 miles/46%	
Pritchard Creek Excl T7	40.0 acres/100%				
Pritchard Creek T8				0.20 miles/100%	
Pritchard Creek T9			0.65 miles/81%	0.15 miles/19%	
Pritchard Cr T1-T9				0.30 miles/100%	
North Pritchard Creek T1	0.40				
Total Miles	0.65 miles/15%	0.20 miles/4%	1.80 miles/39%	1.95 miles/42%	
Total Acres	49 Acres/100%				

Lawrence Creek Pasture:

Creek	PFC	FARU	FARD	FARN	NF
Pritchard Creek Sec.24			0.06 miles/60%	0.04 miles/40%	
Pritchard Creek T6			0.40 miles/66%	0.20 miles/34%	
Pritchard Creek T5				0.35 miles/100%	
Pritchard Creek Guzzler Tributary				0.25 miles/100%	
Pritchard Creek		0.65 miles/21%	1.75 miles/55%		0.75miles/24%
Ayers Creek	0.10 miles/71%	0.25 miles/29%			
Lawrence Creek	1.95 miles/57%	1.48 miles/43%			
Sardine Creek				1.10 miles/100%	
Total Miles	2.05 miles/22%	2.38 miles/25%	2.21 miles/24%	1.94 miles/21%	0.75miles/8%

PFC—Proper Functioning Condition
FARU—Functioning at Risk, Upward Trend
FARD—Functioning at Risk, Downward Trend
FARN—Functioning at Risk, Not apparent Trend
NF—Nonfunctional
T1—Tributary #1
T2—Tributary #2
T3—Tributary #3
T4—Tributary #4
T5—Tributary #5
T6—Tributary #6
T7—Tributary #7
T8—Tributary #8
T9—Tributary #9

Pritchard Creek Allotment #02074 Riparian Site Condition:

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
Lawrence Creek	0.33	1	FARU	Medium	B/4
Lawrence Creek	0.15	2	FARU	Medium	B/4
Lawrence Creek	0.90	3	PFC	Medium	B/4
Lawrence Creek	0.10	4	PFC	Medium	A/3
Lawrence Creek	0.20	5	PFC	Medium	B/4
Lawrence Creek	0.75	6	PFC	Medium	B/4
Lawrence Creek	1.0	7	FARU	Medium	B/4

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
Pritchard Creek	0.20	1	FARU	Medium	B
Pritchard Creek	0.60	2	FARD	Medium	A
Pritchard Creek	1.75	3	FARD	Medium	A
Pritchard Creek	0.65	4	FARU	Medium	A
Pritchard Creek	0.75	5	NF	Medium	B

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
Pritchard Creek T1	0.25	1	FARD	-	A
Pritchard Creek T1	0.25	2	FARN	-	A
Pritchard Creek T1	0.06	3	FARN	-	A
Pritchard Creek T1 to T3	0.09		FARN	-	A

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
Pritchard Creek T3	0.10	1	FARN	-	G
Pritchard Creek T3	0.25	2	PFC	-	A
Pritchard Creek T3	0.25	3	FARN	-	
Pritchard Creek T3	0.09	4	FARN	-	B

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
Pritchard Creek T4		1	PFC	-	A
Pritchard Creek T4	0.30	2	FARD	-	G
Pritchard Creek T4	0.25	3	FARN	-	B/G

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
Pritchard Creek T5	0.35	1	FARN	-	-
Pritchard Creek T6	0.10	1	FARN	-	C/F
Pritchard Creek T6	0.25	2	FARN	-	C/F
Pritchard Creek T6	0.25	3	FARD	-	C
Pritchard Creek T6	0.15	4	FARD	-	A

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
Pritchard Creek T7	-	1	PFC	-	A
Pritchard Creek T8	0.20	1	FARN	-	Aa
Pritchard Creek T9	0.50	1	FARD	-	A
Pritchard Creek T9	0.15	2	FARD	-	Aa
Pritchard Creek T9	0.15	3	FARN	-	A/B

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
North Pritchard Creek T1	0.40	1	PFC	-	B
Pritchard Creek T1 of T9	0.21	1	FARN	-	Aa
Pritchard Creek T1 of T9	0.09	2	FARN	-	Aa
Pritchard Creek Sec24	0.04	1	FARN	-	Aa
Pritchard Creek Sec24	0.06	2	FARD	-	Aa
Pritchard Creek Guzzler Trib	0.25	1	FARN	-	Aa

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
Ayers Creek	0.10	1	PFC	-	Aa
Ayers Creek	0.25	2	FARU	-	A
Sardine Creek	1.10	1	FARN	-	B/C

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
Low Creek	0.50	1	FARD	-	A
Low Creek	0.33	East Fork	FARD	-	A

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
Straw Ranch Creek	0.25	1	NF	-	-
Straw Ranch Creek	0.33	2	FARD	-	B
Straw Ranch Creek	0.50	3	PFC	-	B
Straw Ranch Creek	1.30	4	PFC	-	A
Straw Ranch Creek	0.33	West Fork	FARD	-	C
Straw Ranch Creek	1.25	East Fork	FARU	-	A

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
Alder Creek T1	0.25	1	FARD	-	B
Alder Creek T1	0.25	2	FARD	-	G
Alder Creek T1	0.10	3	FARD	-	-
Alder Creek T1	0.25	4	FARD	-	G
Alder Creek T2	1.30	1	FARD	-	B
Alder Creek T2	0.15	2	FARN	-	-
Alder Creek	0.20	No name	FARN	-	-

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
Holman Creek	0.75	1	PFC	-	G
Holman Creek	1.15	2	FARU	-	G
Holman Creek	0.10	3	FARD	-	-
Holman Creek	0.25	4	FARD	-	-
Holman Creek T1	0.90	1	FARU	-	A
Holman Creek T2	0.60	1	PFC	-	G

RIPARIAN AREAS - CONDITION & TREND					
Riparian Areas	**BLM miles**	**Reach**	**PFC Rating**	**Potential**	**Rosgen Channel Type**
Unity Exclosure	-	-	FARN	-	-
Unity Creek	0.32	1	FARD	-	A
Unity Creek	1.06	2	FARU	-	G
Unity Creek	0.09	3	NF	-	G

Appendix 5: Summary of Range Projects for Pritchard Creek Allotment #02074

Number	Name	Township	Range	Section	Quarter/Quarter
0040	Dry Gulch Spring	10 S	42 E	34	NENE
0478	A Reservoir	10 S	42 E	21	SWSE
0482	C Reservoir	10 S	42 E	22	NESE
0500	K Spring	10 S	42 E	27	NENW
0501	Evelyn Spring	10 S	42 E	26	SENE
0502	R Spring	10 S	42 E	14	NENE
0503	Pamela Spring	10 S	42 E	13	NWSW
0505	Holman Spring	10 S	42 E	26	NESW
0506	I Spring	10 S	42 E	22	NENW
0507	Tina Spring	10 S	42 E	26	SWSE
0549	Leonard Spring #2	10 S	43 E	31	SESW
3504	Carolyn Spring	10 S	43 E	7	SWSW
3507	Marihelen Spring	10 S	42 E	13	NWSE
4012	State Spring	10 S	42 E	10	NWNE
4061	Ormand Spring	10 S	42 E	20	SESW
4076	Devils Spring	10 S	43 E	30	NESE
4126	NE Corner Spring	10 S	42 E	9	NESW
4158	Ant Waterhole	10 S	42 E	24	SWNE
4159	Porcupine Waterhole	10 S	42 E	25	NENW
4160	Cow Reservoir	10 S	42 E	14	NWSE
4161	G Reservoir	10 S	42 E	12	SENE
4162	O Reservoir	10 S	42 E	34	SENE
4163	P Reservoir	10 S	42 E	14	NENE
4164	Q Reservoir	10 S	42 E	22	SWNW
4165	S Reservoir	10 S	42 E	21	SWSW
4166	E Reservoir	10 S	42 E	16	NESW
4167	T Reservoir	10 S	42 E	15	NWSE
4212	Wendt Reservoir	10 S	42 E	23	NWSE
4213	F Spring	10 S	42 E	21	SENE
4214	E Spring	10 S	42 E	16	SWSE
4280	White Spring	10 S	41 E	17	NWNE
4282	Straw Ranch Spring	10 S	42 E	21	NENW
4455	H Reservoir	10 S	42 E	16	SWNW
4456	M Reservoir	10 S	42 E	16	NESE
4457	Pierce Waterhole	10 S	42 E	10	SWSW
4458	Truscott Waterhole	10 S	42 E	15	SENE
4459	Section 15 Reservoir	10 S	42 E	15	NENE
4460	B Reservoir	10 S	42 E	23	SWNW
4461	Grasshopper	10 S	42 E	23	SENE
4462	D Reservoir	10 S	42 E	35	NWNW
4463	R Reservoir	10 S	42 E	14	NENE
4464	Unity Creek Spring	10 S	42 E	25	SWSE
4465	Sheep Waterhole	10 S	42 E	14	NWSE
4466	Horse Waterhole	10 S	42 E	14	SESE
4467	Bug Waterhole	10 S	42 E	13	NWNE
4468	Fly Waterhole	10 S	42 E	24	NWNE
4469	Chris Lee Waterhole	10 S	42 E	12	NENW
4470	Lower Widman Reservoir	10 S	42 E	12	NWNE
4471	Upper Widman Reservoir	10 S	42 E	1	SESW
4472	North End Reservoir	10 S	42 E	1	NESE

Number	Name	Township	Range	Section	Quarter/Quarter
4474	W. Sardine Waterhole	10 S	43 E	7	SWNE
4475	N. Dorset Gulch Res.	10 S	43 E	7	SESE
4476	Bedspring Reservoir	10 S	43 E	17	NWSW
4477	S. Dorsett Gulch Waterhole	10 S	43 E	20	NWNW
4478	S. Guzzler Waterhole	10 S	43 E	19	SWSW
4479	W. Guzzler Waterhole	10 S	43 E	19	NESE
4620	Carolyn Spring Exclosure	10 S	43 E	7	SWSW
4621	State Spring Exclosure	10S	42E	10	NESW

Appendix 6: Pritchard Creek Allotment #02074 AUMs & Utilization Information by Pasture

White Rock Pasture:

FISCAL YEAR	TOTAL AUMS TAKEN	PERCENT UTILIZATION DATA
1978	0	0
1979	545	45
1980	893	45
1981	1003	46
1982	0	0
1983	513	42
1984	626	53
1985	430	34
1986	257	32
1987	0	0
1988	340	55
1989	884	70
1990	361	40
1991	0	0
1992	646	65
1993	438	65
1994	400	22
1995	0	0
1996	649	-
1997	628	28
1998	681	37
1999	444	-
2000	589	50
2001	465	-
2002	958	-
2003	459	75
2004	623	-
2005	697	-
2006	-	-

Holman Pasture:

FISCAL YEAR	TOTAL AUMS TAKEN	PERCENT UTILIZATION DATA
1978	811	35
1979	912	40
1980	755	45
1981	0	0
1982	804	-
1983	814	42
1984	998	47
1985	0	0
1986	482	25
1987	905	46
1988	447	19
1989	75	-
1990	1019	42
1991	698	24
1992	407	22
1993	170	-
1994	354	-
1995	642	38
1996	739	-
1997	360	36
1998	528	41
1999	549	38
2000	497	40
2001	690	-
2002	493	-
2003	509	40
2004	701	60
2005	572	-

Lawrence Creek Pasture:

FISCAL YEAR	TOTAL AUMS TAKEN	PERCENT UTILIZATION DATA
1978	787	-
1979	846	58
1980	161	-
1981	475	-
1982	1063	-
1983	946	-
1984	306	-
1985	591	24
1986	1052	35
1987	1057	43
1988	0	0
1989	547	16
1990	712	13
1991	428	17
1992	0	0
1993	863	35
1994	522	50
1995	441	-
1996	0	0
1997	665	33
1998	605	26
1999	509	-
2000	497	31
2001	156	-
2002	275	-
2003	774	-
2004	629	-
2005	629	15

Upper Pasture:

FISCAL YEAR	TOTAL AUMS TAKEN	PERCENT UTILIZATION DATA
1978	779	45
1979	0	0
1980	540	30
1981	997	-
1982	608	50
1983	0	0
1984	589	42
1985	623	30
1986	0	0
1987	420	30
1988	795	50
1989	868	30
1990	0	0
1991	708	24
1992	403	43
1993	568	-
1994	74	-
1995	714	45
1996	464	40
1997	394	22
1998	156	-
1999	189	-
2000	156	-
2001	642	-
2002	156	-
2003	158	-
2004	126	25
2005	819	-

GPO U.S. GOVERNMENT PRINTING OFFICE: 2007 — 676-082 / 03088 Region No. 10

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Baker Resourcce Area
3285 11th Street
Baker City, Oregon 97814

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

FIRST CLASS MAIL
POSTAGE & FEES PAID
Bureau of Land Management
Permit No. G-76

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BUREAU OF LAND MANAGEMENT

BAKER RESOURCE AREA

BLM/OR/WA/AE-07/080-1792